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ORIGINAL ADDRESSES.

PRESIDENT'S ADDRESS.¹

BY JAMES F. HIBBERD, M.D., LL.D.,
OF RICHMOND, IND.

At every annual meeting the officers of the Association, particularly the permanent Secretary and the Treasurer, have difficulty in appeasing delegates who are not received because the credentials presented by them have not been issued by a society entitled to representation in the Association. The law regulating this matter is plain, to wit: "The delegates shall receive their appointment from permanently organized State Medical Societies, and such county and district Medical Societies as are recognized *by representation* in their respective State Societies."

The difficulty lies in the fact that some of the State Societies are not representative bodies, and consequently this constitutional provision cuts off all delegates from such States except those commissioned by the State Society itself. While this is the letter of the law it is not the spirit that animates the organization of the Association. The constitution should be revised in this particular at least. There are two ways of overcoming the trouble; 1. Strike out the words "representation in" from the constitution where it prescribes the qualifications of delegates, leaving all such county and district Medical Societies as are recognized by their respective State Societies fully authorized to commission delegates to this Association. The other and better plan would be for every county society in each State to be represented in its State Society. Facile methods of accomplishing this can readily be selected. Perhaps the plan of organization so long in successful and satisfactory operation in Indiana might serve as a paradigm. There each county has its society, known by the name of the county, and the State Society is composed of all the members of all the county societies. Annually each county society selects delegates to the State Society, and at the same time nominates delegates to the American Medical Association who are commissioned by the State Society. This simple plan secures substantial autonomy to the county societies and provides for equal representation to the Association from every part of the State. Every member of every county society can attend the meetings of the State Society and participate in all business except voting. This seems to me both theoretically and practically adapted to a complete organization of the profession in every part of the Union, and if this Association, at this session, would formulate a scheme similar in spirit and in terms recommend it to the con-

sideration of such State Societies as do not now have an equally servicable organization, it would, in my judgment, be doing a good work, sowing seed that would bring forth sound fruit in the future. In Indiana the State Society and each county society are legal corporations, and while this is not essential to its method of organization of the profession of the State it is to my mind desirable.

In this connection I desire to lay before you some thoughts touching the arrangement of subordinate medical societies in their relation to the American Medical Association. Every medical man who belongs to any medical society should belong to a county or an equivalent medical society, and every member of a county society should be, *ipso facto*, a member of his State Society, and this an *open sesame* to the American Medical Association. By this arrangement all reputable physicians in the United States would be brought together in a common guild whose power to do good within its legitimate sphere would be limited only by its aggregate wit and energy. Such a consummation would place this Association in a position to fulfil the mission hopefully anticipated for it by its earnest and patriotic founders, and would elevate the American profession to a plane for useful work, the highest conceivable for the disciples of scientific medicine.

This would in no wise interfere with the organization of medical men devoted to special lines of practice or investigation; indeed, the more of these, and the more special their fields of labor and inquiry, the more rapid will be the development of medical knowledge, the nearer will expert art approach to perfection, and the greater will be the blessing to humankind. In these special and limited societies there will be a concentration of thought and labor that will yield results advanced and true to a degree beyond hope from a more promiscuous assembly.

All the adherents of the special organizations will be members of county societies, and thereby of their respective State societies, whence, for the asking, they can step through the portals of this Association, and find in our sections a department already organized and at work, into which they can enter, each according to his tastes or qualifications, and feel at home among fellow-laborers.

A member of either of these special organizations entering the appropriate section will find himself in the midst of all the members of the Association whose tastes run parallel with his own, whether specialist or general practitioner; and it is this mingling of these sundry classes of investigators and practitioners, exchanging views and detailing experience, that creates the vast stores of profit and pleasure so much enjoyed at our annual meetings. In this scheme for the organization of the American Medical profession is there not promise enough to make us hope and labor for its early consummation?

¹ Delivered before the American Medical Association at the forty-fifth annual meeting held at San Francisco, June 5, 1894.—Abridged.

A sentiment was expressed last year at Milwaukee by a member, and has, I think, some currency among other members, that indicated a misconception of the character and *personnel* of the sections as I view them. The sentiment was uttered in a private discussion of the propriety of conferring on the Business Committee the functions of the Nominating Committee, and was substantially this: My colloquist said: "The Business Committee is made up of ex-chairmen of sections; the sections are in the hands of the specialists; the specialists reside in the greater cities, and consequently the Business Committee will be constituted of special practitioners who hail from the greater cities, and some of the cities are great enough to furnish half a dozen chairmen at once. This will not only exclude general practitioners from a voice in the selection of officers of the Association, but may by chance or design place the general business of the Association under the management of specialists from a few of the more important cities of the country." The error of this misrepresentation lies in the fact that its entertainers fail to recognize that the aggregate membership of the sections of each annual session is the total membership of the Association in attendance.

True, in each section there will be members of the special society whose work is the same as that to which the section is devoted, and there will be others whose engagements are limited to the same line of practice; but these combined, except in two or three sections, will not number more than a small minority, probably not a tenth of those enrolled in the section; the other nine-tenths will be general practitioners whose professional proclivities have directed them to the section; and these general practitioners have the power by their votes, the right by virtue of their membership, and the obligation under their duty to the Association, to elect the best man in the section to its chairmanship, without inquiry whether he lives in a big city, a little city, or a hamlet, and in so doing will make it patent to every thoughtful mind that the *personnel* of the Business Committee will be selected under conditions to insure as intelligent, as well distributed, and as trustworthy a committee as the Association can secure. And, moreover, the function of a nominating committee is to nominate—not elect; confirmation or substitution is in the authority of, and always exercised by, the Association. I am led to present this subject in this light and to this extent because I feel that a majority of the members recognize the imperfections of our present mode of selecting the Nominating Committee, and realize that the welfare of the Association calls for a committee to exercise the important functions of the Nominating Committee, which has elements of permanence in its organization, and whose *personnel* has been selected with something of deliberation.

When Dr. George M. Sternberg was appointed Surgeon-General of the Army, in May of last year, he made two innovations in the administration of the affairs of the office: First, in establishing an Army Medical School, to give passed candidates for appointment to the Army laboratory practice in bacteriology, sanitary chemistry, and other essential instructions for military service; second, in filling the position of attending surgeon in cities having good facilities for medical improvement with young men who were preparing for promotion.

These changes did an excellent work that was accomplished without additional expense to the Government; the Museum and Library Building furnished the rooms, and the medical officers on duty in Washington did the teaching in addition to their regular work. But the number of active young surgeons about Washington and other cities attracted observation, and led the chairman of the Committee on Military Affairs to conclude there was a surplus of assistant surgeons, and in his report to the House he reduced the number from 125 to 90, thus inhibiting fresh appointments until the number shall be so reduced. This recommendation has passed the House, and if it should be approved by the Senate will greatly embarrass the medical service of the Army, and in the end be a detriment to the country, because many military posts will have to depend on civil physicians for medical attendance, and in case of war these would not take the field, and the Army would be without trained medical officers, which would be as serious an evil as unskilled officers in any other department. When these facts were pointed out to the chairman of the committee by other members with better knowledge of practical military affairs, the chairman replied that no one outside the Army surgeons had complained—not a single medical society had claimed that injury would be the result.

Let the American Medical Association at once call the attention of Congress to the mistake threatened.

Many of you may remember that the last Congress of the United States was about to refuse an appropriation to continue and complete the publication of the *Index-Catalogue* of the Library of the Surgeon-General's Office, the venerable chairman of the House Appropriation Committee alleging that the medical fraternity was demanding too much, in fact had already received more than the lawyers or any other professional guild. This state of affairs becoming a matter of common fame, some physicians interested their Representatives in the House by presenting to them the true state of affairs, with the result of a concerted effort being made in the House to enlighten the assembly to the extent of convincing the members that this was not an appropriation for the benefit of medical men, but to complete a great educational work for the benefit of the whole people, the doctors' relation to it being that they must do the work, because no other class of men were trained to the service. The appropriation was saved and the *Catalogue* is nearing completion.

But there is still a point in connection with the appropriation for the Library that needs attention, that can probably be better given by this Association than otherwise, and that is the restoration of a part of the appropriation for support of the Library which was dropped by the last Congress and the cut continued in the Military Bill before the present House. For twelve years the appropriation was \$10,000, but the last Congress reduced it to \$7,000, and the present Congress proposes to continue the reduction. Doubtless most Congressmen, and possibly some physicians, regard the Library of the Surgeon-General's Office as an ordinary department library, intended mainly for the use of the medical officers of the Army; but in truth it is the National Medical Library, open to and used by physicians from all parts of the country, and the possibility of finding at one place in this coun-

try the greater part of the literature on any medical subject has exercised a powerful influence on American medical literature and education.

The Library aims to obtain every medical book, periodical, and report published in any country or language as soon as possible after its issue, and have it at once catalogued and indexed and made available for use. This requires about \$7500 annually. There are still between twenty and thirty thousand volumes of medical books published years ago required to complete its equipment to meet all calls made upon it. These volumes are out of print and only to be obtained from secondhand booksellers and auction sales as opportunity offers, and will involve say \$2500 spent annually for perhaps ten years. Does not this condition of the Library and its support make a demand on this Association for aid, either as an organization or through the influence of its individual members on their respective members of Congress?

The desirability of supervision of public health by the General Government has been recognized by this Association for many years and manifested in various ways. Four years ago a committee, with Dr. C. G. Comegys chairman, was appointed to prepare a bill and petition Congress on behalf of the Association to establish a Department of Public Health, with a Secretary for its chief, who should be a member of the President's Cabinet. This committee has done much earnest work, drafted a bill and presented it to Congress, devoted labor and time personally to its advocacy before committees and members of Congress. The committee has been continued, somewhat modified, and has reported annually to the Association, and will present an interesting report to this meeting, to which I invite your thoughtful attention. Last year the Association appointed another committee, with Dr. U. O. B. Wingate as chairman, to consult with a like committee of the American Public Health Association, which has for several years been engaged in an effort to induce Congress to enact a law placing the supervision of the public health in charge of the General Government. This committee will also submit a report for your consideration.

Other organizations have likewise entered Congress with petitions asking that the General Government be clothed with authority to execute measures to assist in protecting public health. Much good may be anticipated from the attention these several sanitary organizations will excite both in the Congressional and public mind, and I doubt not that when the agitation has accomplished the valuable result of cultivating a knowledge of what is essential to the public welfare it will lead to a union of effort on the part of all workers that will insure satisfactory results.

My interest in the premises is such that, during the year I have sought, through personal intercourse and a wide range of correspondence, to ferret out the best plan for supervision of public health that we can hope to have Congress crystallize into a working law. Without rehearsing details, I feel free to declare my conviction that enough has been ascertained of the sentiment of the executive and legislative departments of the Government to rob us of all hope of the establishment of a Department of Public Health within the remainder of the nineteenth century.

A bureau of public health, with a commissioner as its chief, within one of the existing departments of the government, was apparently within reach of a united, harmonious, aggressive effort of the profession for a year or two previous to the enlargement of the power of the Marine Hospital service by the last preceding Congress, but the excellent work of that service at home and abroad since its increase of authority and means has lessened the anxiety of the Government and the apprehension of the public in such degree as to make those in power less attentive to appeals to do what should yet be accomplished.

The outlook at this time for securing a Bureau of Public Health during this session of Congress is not encouraging, but if the problems in silver, and tariff, and national revenue should be speedily and satisfactorily solved there might appear a ray of hope for a bureau within the life of the present Congress, provided the medical and sanitary professions would make common and joint effort in demanding it.

At present there is no measure formulated in this behalf so worthy of support as the New York Academy of Medicine bill now in the hands of Congress, and in making this declaration I by no means ignore the fact that strong opposition to that bill has been made by strong men, but I well know that no important measure like that can be inaugurated without challenging adverse criticism, but my abiding faith in the fitness of sanitary human nature for great things is such that I harbor no doubt that if the opponents of this bill present a better one than it, its friends will accept it, and if this bill sustains its present status under severest scrutiny its opponents will join in urging its enactment into a law, and thereby vindicate characters at once wise and patriotic.

While a century of experience has convinced the great body of intelligent people that vaccination is the true and only prophylactic for smallpox, it has not carried conviction to the extent its merits deserve and the welfare of the people demands. The causes of this are not difficult to discern; vaccination and other forms of sanitation have prevented a visitation of the epidemic of smallpox in this country for a generation, and people have lost the fear of its contagion through ignorance of its nature while progressing, and its sequelæ if its victim survives. Add to this the disorders that sometimes follow the insertion of pure vaccine in a cachectic system, and the greater evils arising from the use of spurious or imperfect vaccine and careless vaccination, all open to the observation of the public and subject to amplification by cranks and the maliciously ignorant, and we cannot marvel that there is a positive distaste for vaccination among a considerable portion of our population, and a carelessness about securing it on the part of a much larger number. A knowledge of these facts should only inspire physicians and other sanitarians who are the custodians of the knowledge of the value of vaccination to redoubled activity in devising and executing popular methods of instruction as to the entire reliability of vaccination to protect from smallpox, as much so as smallpox itself, and that with pure vaccine inserted under proper conditions into the tissues of a person fit to receive it there is positively no shadow of evil, but a promise of good not surpassed by any other single measure of preventive medicine.

Evidence accumulates that the undetermined conditions that conduce to the propagation of smallpox are now, and for at least two years have been, prevalent in this country, resulting in outbreaks of the disease more or less serious in various parts of the country, and too often leaving foci from which fresh infection is distributed. Under these circumstances it seems to me the reasonable duty of this Association at this time to declare and proclaim its unabated faith in the virtue of vaccination to protect from smallpox, to render persons as immune against variola as an attack of variola itself, and that it is innocent of all mischief when the vaccination is done by a vaccinator who is a competent judge of both the purity of the vaccine and the fitness of the vaccinee.

Let us abide in the hope that the Jenner centennial celebration provided by this Association, and to be a part of its exercises at the annual meeting in 1896, may bring out the boundless blessing of the discovery of the immortal Jenner in such wise that all men shall see and acknowledge its protecting power, and even the way-faring man, though a fool, may not err by further causeless cavil.

Two leading purposes the fathers of this Association had in view at its organization, demanding its serious consideration, were the elevation of the standard of medical education and that the authority to decide upon the sufficiency of the qualifications of a candidate for a diploma should not rest with his teachers.

Much has been done in advancing the extent and character of the collegiate instruction of medical students; the examination of candidates for diplomas is still conducted by teachers who instructed them, as was done then, and is no more satisfactory to the thoughtful minority of the profession now than it was then. Forty-eight years ago seven professors formed the conventional number of the faculty for medical colleges, and the annual term was twenty weeks, and in the two terms required for graduation the students heard the same lectures each year. Now there are medical colleges requiring attendance four years of seven months each, on graded courses under, in some instances, as many as forty-eight instructors. This for the equipment for graduation, while one post-graduate school announces one hundred and sixty-four instructors. Certainly the Association has ground to congratulate itself on the fruits of its persevering labors to secure more thorough medical education; but this has been the theme of so much of the literature of the Association that I drop the general subject and confine my remarks to one suggestion as to a particular line of instruction.

The progress of medicine in the immediate future must be along biologic lines, and to me it seems desirable that every medical college should have a chair devoted specially to instruction in biology. Within the current year, responding to an invitation to make some remarks on matters pertinent to a lecture on bacteria which had just been delivered, a gentleman of superior culture, of extensive travel, and acute observation, a lawyer by profession and a statesman by practice, said that the status of physicians had within comparatively few years undergone a marked change. In earlier historic times the priests were accounted of highest rank and worth in the civil professions; then came a period when the devotees of statecraft received highest honor, and exercised most

potent influence in the affairs of men; physicians held subordinate rank and position both in war and in peace; but in the last few decades the relations of these professions among themselves, and in their standing before the world, have undergone significant change, until, from being the lowest, physicians are now rising above the other liberal professions, and will steadily move forward until they are accorded the first place among honored people of the world, and this for the reason that they have devoted themselves by rigid scientific investigations to make patent the causes of disease, and to determining exact measures for emasculating these causes, and for neutralizing their effects when they have eluded detection or escaped emasculation. My own sentiments accord entirely with the spirit of the views enunciated by the learned gentlemen, and my estimate is based on the result of the more exact methods applied to the investigations of the laws by which the omnipotent Creator has fashioned the world and continues its government. The microscope in skilled hands, and its revelations compared and classified with scientific acumen, have revolutionized our knowledge of the world of living things below the world of macroscopic living things, and in this minor, and, to us, newly revealed world, have been discovered the generators of the most extensive, persistent, and malignant epidemics that periodically decimate the earth, as well as many of the most frequent, and intractable, and fatal disorders that we have always with us. All this knowledge has been wrought out by the devotees of one branch of biology, and another line of biologic workers have carried us back through the morphology of organs, tissues, and cells to the origin of vital activity in protoplasm, and, still more important in doing so, have given us glimpses of the origin and development of the somatic mind that will, when the scheme of nervous organization and function shall be clearly portrayed, dissolve the mystery that has in the past obscured our realization of the true nature of hypnotism, Christian science, and other anomalous neuroses which the sciolists, and in an especial manner those claiming to be doctors, are promulgating and practising, to the discredit of true scientists and the injury of the ignorant and weak-minded classes.

We should apotheosize protoplasm, the dividing line between inorganic and organized matter, itself at once the result of the law of perpetual motion with which the Creator endowed the atoms of elemental matter, and the beginning of that phase of energy known as vital activity, which, in its development, as now presented to us, constitutes the entire vegetable and animal kingdom.

No one people or class of people can claim exclusively to have opened the way into this more primitive arcana of Nature. The physicists of all nations, botanists, zoölogists, anatomists, physiologists and their congeners have all participated in this progress. Schwann and Virchow and Ferrier and Jackson and Pasteur and Koch and Sternberg may be mentioned, without prejudice to the labor, name or fame of their many coadjutors, as examples of what benefactors to our race scientists may become whose genius lifts them to a plane of investigation not covered by the curricula enforced in the medical schools of their day, and their distinction is due to their advanced study of biology.

This review impresses me with the importance of es-

tablishing in each of our medical colleges where a finished education is intended, a chair especially devoted to teaching the principles and practice of biology on the lines and to the extent herein indicated, from whose alumni we shall have more quickly arise neophyte Virchows, Pasteurs, Jacksons, and Sternbergs, whose labor, when further advanced, shall hasten the day when the world shall recognize the medical profession as the paramount benefactors of the human race, by virtue of suppressing the causes of all preventable disease and alleviating the suffering, shortening the duration, and lessening the ravages of such as cannot be prevented. And with this higher estate of the disciples of Æsculapius will come such insignia of real knowledge, such fruit of expert skill, that he who runs may read the lines that broadly separate the true physician from ignorant or unscrupulous pretenders.

Amendments to the constitution are always pending, sometimes many, sometimes few; those submitted the preceding year are disposed of at each annual session, but others take their place for consideration at the succeeding meeting. Few of these are approved by the Association, being lost through failure to receive the support of three-fourths of the delegates present, or by not being called up by their authors or others.

Last year a special committee, appointed at the last preceding meeting, made a report remodeling the entire constitution, which necessarily laid over until this meeting, and the committee, being continued, will make further report here, and the whole subject will come up for final disposition at this meeting. It is apparent to all who have given attention to the matter that there is much feeling among the members who have been active in working up the changes that will be offered as a substitute for the constitution as it now exists, and also among those who regard the innovation an evil instead of a benefit. But while these feelings are right and proper in themselves, they need not claim other than watchful attention to secure a fair and unbiased expression of the will of the Association according to the method prescribed by our laws, and in so doing there is nothing to excite passion or interfere with that calm deliberation that distinguishes the proceedings of an assembly composed of cultured and refined people seeking the welfare of the guild to which they belong. This may readily be done by taking a vote to determine whether the voters present desire any change in the existing constitution. If this decision is against any change the question is concluded for the nonce. If the decision expresses dissatisfaction with the constitution as it is, the next question should be: Is the report of the Committee of Revision precisely what the voters want as a substitute? An affirmative vote here settles the matter, and a negative vote will call for amendments that will adjust either the existing constitution or the committee's substitute until it conforms to the wish of the delegates. Is it not palpable to every considerate mind that all this may be done without excitement of any kind, and with a minimum waste of the time of the Association?

And so too with our Code of Ethics. For many years there has been a feeling among many most excellent and intelligent working members of our guild that the Code did not fairly accord with the demands of the advanced profession in their intercourse with each other, nor with the

proper reciprocal relations between the profession and the public; while, on the other hand, many members equally intelligent and devoted to the Association have felt that the Code of Ethics that has guided the Association through nearly half a century prosperously and honorably, and is still a reliable guide in every advanced thought and action, cannot be bettered for our present status, and should not be disturbed. At Detroit, in 1892, this agitation culminated in the appointment of a committee to inquire into the expediency of revising the Code. This committee last year submitted two reports, the majority recommending an amended Code, and indicating the lines on which emendation should proceed. The committee was continued to complete its labors, and the fruit of its service will be before you in an extended report. The minority report claimed the sufficiency of the Code as it is, and recommended that it be left intact. Here also, even more than with remodeling the constitution, there is much warmth of feeling, and as in that case a little calm forethought will convince that a primary vote, involving the question whether or not the voters want any alteration of the Code, may end the consideration of the subject without excitement, confusion, or overwarmth of feeling by a decision to let the Code stand as it is, and a contrary decision will call for such further procedure as recited for the completion of an amended constitution, and in this, as in that, the work should be done as intelligent and fair-minded citizens transact important business, with decorum and without waste of time.

Touching the sufficiency of the Constitution and Code of Ethics of the American Medical Association as they are now, I have well settled convictions, the result of many years' observation, experience, and reflection, but I am not here to proselyte to my opinions. As I interpret my mission on this occasion, it is to exercise my influence and use my authority to secure to those here entitled to vote a clear expression of untrammelled judgment, and to encourage a cheerful acquiescence of all parties in whatever conclusion may be thus reached.

Shall I not have the co-operation of every friend of the American Medical Association present in this laudable effort?

ADDRESS OF THE CHAIRMAN OF THE SECTION OF OBSTETRICS AND DISEASES OF WOMEN, AMERICAN MEDICAL ASSOCIATION.¹

BY JOSEPH EASTMAN, M.D., LL.D.,
FORMERLY PROFESSOR OF ANATOMY AND PROFESSOR OF GYNECOLOGY
AND ABDOMINAL SURGERY, CENTRAL COLLEGE OF PHYSICIANS
AND SURGEONS, INDIANAPOLIS, INDIANA.

MR. CHAIRMAN, LADIES AND GENTLEMEN: It seems best on this occasion to turn aside from the usual custom of reporting progress in the department of Obstetrics and Gynecology, a subject which has been so often and so ably presented by my predecessors, and call your attention to the present status of suprapubic hysterectomy, as viewed from the standpoint of personal observation and clinical research, with the hope that I may contribute in some small measure to the profitable discussions which I am quite sure will follow the reading of the valuable papers on your program.

¹ Delivered at San Francisco, June 5, 1894.

It is not my intention to report a series of operations performed for the removal of symmetrically formed pear-shaped tumors with well-defined broad ligaments, with uterine arteries easily accessible and pulsating in their anxiety to be ligated—tumor, ligaments, and arteries dealt with by some definite method, each operation performed in exactly so many minutes, and all the patients making uneventful recoveries. The literature of the subject is already cursed with such productions. Therefore, I would rather suggest such means and methods as experience has taught me will furnish the best possible results in dealing with tumors by no means symmetrically formed; with broad ligaments displaced and disorganized by nodular masses interfering with the ligation of arteries and the easy formation of pedicles.

Despite the efforts of some to name a distinct method of operating, because a flap is made here, or a ligature placed there, the problems of suprapubic hysterectomy are rapidly nearing their solution. Those engaged in the work are divided into two classes: First, those who have been and are yet satisfied with forming a pedicle and fixing it in the abdominal wound; second, those not satisfied that this method is the best that could be devised, and who have earnestly endeavored to reach some method that shall disregard the morphology of tumor, of broad ligaments, and the location of uterine arteries.

On February 3, 1887, knowing full well that abdominal fixation of the pedicle in suprapubic hysterectomy had at that time given the lowest rate of mortality, I decided not to operate in that way, but planned and executed an operation which in every essential feature was an extirpation of almost the entire cervix. A large cautery passed three times down through the cervix in reality destroyed a large portion of what little cervix was left. A rubber drainage-tube was inserted for vaginal drainage.

In a recent discussion in the *New York Journal of Obstetrics and Gynecology*, the operations by Stimson, Krug, Baer, and myself are spoken of as if they were all operations of total ablation of the uterus. If these operations are to be considered, then the operation of Stimson in November, 1888, was antedated by my determination to secure something better than the abdominal fixation of the pedicle, on February 3, 1887.

It is not my purpose to occupy time in discussing questions of priority, although the operation, including the use of my hysterectomy-staff, as I demonstrated it at the International Congress in Berlin, has since been performed many times by Chrobak, of Vienna, and by numerous American operators, with great satisfaction, and while I received many congratulatory letters from distinguished operators, on account of the rapidity and definiteness of the operation made possible by the use of the staff, I have been working to still further simplify and perfect the operation.

I concede the fact that when a given fibroid tumor has no nodular masses in the region in which we would form a pedicle or imbedded in the broad ligaments, and when the abdomen is not exceedingly fat, abdominal fixation has given results, in the hands of expert operators, in a very high degree satisfactory. So far as I have been enabled to read the writings of its warmest advocates, none of them has mentioned the very strongest point in its favor: namely, that in this method we have practically one wound, whereas in total or partial ex-

tirpation-methods we have two wounds, the one in the abdomen, the other in the pelvis, the latter extending, through connective tissue rich in lymphatics, down to the vagina, an incubator for many varieties of bacteria, and which cannot always be sterilized and maintained aseptic during an operation. Notwithstanding the strong points in favor of abdominal fixation of a pedicle, which I have mentioned, it has been the subject near my heart for nearly eight years to study out the anatomy and its displacements by pathologic neoplasms, and perfect a method as speedy of execution, followed by as successful results, as any or all other methods—a method applicable not only to tumors when a pedicle for abdominal fixation could be easily formed, but also to those cases in which nodular masses have completely disorganized the cervix, and intra-ligamentous masses are found in the broad ligaments of one or both sides.

I became well convinced a number of years ago that the use of the clamp of Keith or the *serre-nœud* of Koeberlé for controlling hemorrhage from the neck of the uterus was based upon the idea that the spiral or curling branches given off from the uterine arteries really penetrated the tissues of the uterus, including its cervix. Some seven text-books on anatomy, which I have examined, state that these branches penetrate the uterus. I have a number of times, with fingers on the broad ligaments and their contained vessels, cut directly through, seizing the spurting vessel, and securing it later. I have also peeled off the uterine arteries from the sides of the uterus and then cut off the cervix with little or no hemorrhage.

These studies were made for the purpose of reducing the number of ligatures,¹ long or short, to become encapsulated or slough off through the vagina, and also to economize the time required for their thorough application.

Here is a nodular mass, fed and nourished by a capsule—a capsule containing the venous and arterial capillaries. It is well known to every gynecic surgeon that these nodules can be peeled out of the capsule without ligating a single artery. What I have stated regarding the nourishment of this nodule by its network of capillaries, and not by the penetration of the arteries (for surgical purposes), holds true with reference to a uterus disorganized by a fibroid tumor or tumors, no matter how large or how small; not only the fibroid uterus, but the normal uterus as well; not only the uterus, but its entire cervix down to the external os.

I here present a specimen (a photograph of which can be seen in the *American Journal of Obstetrics and Diseases of Women* for the current month), and to my mind it marks a new era in the removal of fibroid tumors by hysterectomy, for the reason that the uterine arteries were not ligated at all. I went down between the uterine arteries and the uterus. The uterine arteries were absolutely left in the pelvis of the woman, not a single ligature being used except those which tied off

¹ A ligature to secure the uterine arteries will often secure a certain amount of muscular and connective tissue, and is one of the possible sources of infection of the wound; hence the importance of having as few ligatures constricting tissue in this work as possible.

the ovarian arteries and a small portion of the upper border of the broad ligaments.¹

Then, in addition to solving the problem as to what to do with the pedicle, by deciding not to have any, we now solve the problem as to what to do with the broad ligaments and especially their contained uterine arteries, by simply leaving them in the pelvis of the patient.

In this case I simply controlled the circulation in the ovarian artery by ligating the upper portion of the broad ligaments with a strong ligature; then cutting the broad ligaments above the ligature, began with the serrated gouge to peel down the broad ligaments, keeping the gouge close to the tumor, being especially careful in the interspaces between the nodules not to puncture or tear the uterine artery or any of its branches. From time to time, nicking the edges of the peritoneum with button-pointed scissors, with the serrated cutting edge I pushed it forward under the peritoneum, anteriorly and posteriorly, so as to make anterior and posterior flaps. Then, pushing with the serrated gouge, I carefully worked around the tumor until I had reached the uterine cervix, and then proceeded with still greater caution not to cut the cervix or its capsule, but to push it down as I now slip my cuff toward my elbow with the fingers of my right hand. The enucleation of the lower portion of the uterus, including its cervix, reminds me of Professor Sayre's admonition when removing the head of the femur for hip-joint disease. He says, "I take this oyster-knife and work my way past the trochanters, major and minor, then make sure to get beneath the periosteum close to the bone." Then he used to say, "d—n the anatomy, stick close to the bone," and proceeded to peel off the periosteum until he had the entire head of the femur out of the acetabulum.

As I reached this lower part of the cervix my hysterectomy-staff was passed up the vagina by my son, Dr. Thomas B. Eastman. I then removed the entire cervix, cutting a little opening upon the staff, slipping a strip of gauze in the fenestra of the staff. When the staff was withdrawn this was brought down in the vagina, the upper portion of the gauze being packed into the pocket from which the cervix had been enucleated. The flaps which I had dissected off from the tumor and the cervix were brought together by buried suture over the ligatures, which had included the ovarian arteries, so that their raw ends also came into the wound. Several rows of buried suture were used, so that all raw edges made by peeling out the cervix were deeply buried so as to prevent leaking into the peritoneal cavity, the gauze being dragged down into the vagina a little each day, and facilitating perfect drainage in that direction. This operation is the *realization of the ideal*. Heretofore all of us had simply been *idealizing the real*. In a lecture delivered to the Post-Graduate School of Chicago, in July 1893, I closed with a series of conclusions. From them I quote the third, to wit: "When the neck of the uterus remains small, the abdomen not too fat, after the

ovaries and tubes have been tied off the pedicle may be fastened in the lower angle of wound and give satisfactory results." To this conclusion, stated at this time, I have this to add: When such anatomic conditions exist, enucleation of the cervix can be done in less time than the manufacturing of the pedicle, the adjustment of the *serre-nœud* and elastic ligature. Furthermore, abdominal fixation of the pedicle cannot be accomplished in all cases.

In conversation with several distinguished abdominal surgeons, including Dr. Bantock, of London, I find that these gentlemen quite frequently meet with cases in which no pedicle can be formed to fix in the abdominal wound. It is to this class of cases I would invite the best directed efforts on the part of those who have a heartfelt interest in this class of suffering women.

One's percentage of recoveries would undoubtedly be much better if, after making a careful examination which discloses a tumor deeply imbedded in the pelvis, we would discourage operative procedure; but in my first one hundred hysterectomies I found a number of cases presenting gangrenous tumors and tumors containing gangrenous nodules, causing slow death in some cases and rapid death in others, from septicemia. Within the last six months I have operated on seven women who had either gangrenous fibroid tumors or fibroid tumors with gangrenous nodules. In five of the cases the nodular masses were deeply imbedded in the pelvis, and two of the cases were operated on within one week. In each case a nodule as large as a coconut was completely imbedded in the broad ligaments, having been developed from low down on the side of the uterus, and in both cases the nodular masses were in an advanced state of gangrene, in consequence of which there was an elevation of temperature ranging from 100° to 103°. In two other cases the subserous tumors had become gangrenous from small twisted pedicles.

In each case rapid and well-pronounced septicemia threatened the life of the patient. Surely the technique of suprapubic hysterectomy is not complete until it is guided by sound surgical principles. We have methods and means for this class of cases.

In this class of cases I have been pleased with the rapidity with which we can ligate the upper portion of the broad ligaments, cut the same loose from the tumor, peeling the peritoneal covering off from the tissue, leaving a little subserous tissue beneath it; enucleating nodular masses and directly find ourselves down on the uterine cervix close to the external os with only an occasional bleeding from some enlarged arterial twig.

The most serious question in my mind in these cases is how to properly drain the cavities from which the nodular masses have been enucleated. In a recent case I packed the cavity in the broad ligament, from which I had enucleated a gangrenous mass as large as a coconut, with iodoform-gauze, bringing the same out at the side of the pedicle, which I had fixed in the abdominal wound. In addition to the gauze I placed a metallic drainage-tube well down into the pocket. I wished to be absolutely certain that this cavity was thoroughly drained, believing that in other cases in which I had trusted to gauze alone for drainage it was not satisfactory. In the first forty-eight hours we pumped out of this drainage-tube fully a pint of black blood, which,

¹ Sauter, three-quarters of a century ago, removed the uterus per vaginam without clamp or ligature. (See article by Dr. Guido Bell, Indiana Med. Journal, February, 1894.) Further, the enucleation of the cervix per vaginam was made by Langenbeck in 1813; by Recamier in 1829, and by Malgaigne at a later date. (See letters by Dr. Robert Reyburn, THE MEDICAL NEWS, February 10, 1894, p. 146, February 24, 1894, p. 223, and May 12, 1894, p. 529.)

coming from the cavity occupied by this gangrenous nodule, emitted considerable odor, notwithstanding the thorough washing of the cavity through the drainage-tube. I believe it would be better in such cases to secure the most thorough vaginal drainage, not only through the opening made by the enucleation of the uterine cervix, the same being packed with gauze surrounding a drainage-tube, but by making a free and direct opening from the bottom of the cavity in the broad ligaments into the vagina. It has been taught that the dangers of removing cysts or fibroids from the broad ligaments lies in the disturbance of important plexuses of nerves. My observation leads me to believe that the shock is not materially great in such enucleations, and that the bad results following such operations are due to the use of drainage which does not properly drain. But while I secured the most perfect drainage in the case referred to, by bringing the drainage-tube up to the side of the pedicle, I would not advise abdominal fixation of a pedicle in cases in which nodular masses are enucleated from the broad ligaments and even imbedded in the region of the cervix, where we would form a pedicle, believing that these cases can be treated more successfully by removal of the entire cervix, with free vaginal drainage.

As I suggested at the beginning of this paper, one of the great objections to total extirpation of the cervix and vaginal drainage is that we make an additional wound and have a possibility of vaginal infection. I concede further, that it is not always possible to render the vagina surgically aseptic. I have had a number of cases in which I used the most thorough antiseptic douches, and then sought to wash out the cavity of the uterus for the purpose of packing the same with iodoform-gauze and also to close the external os by firm suture, and found the cervix and external os so retracted into one of the cul-de-sacs or behind the pubes that it was impossible to reach it with any form of speculum in such a manner as to enable me to pack the cervical cavity or stitch the same, so that during our handling of the tumor we found a large quantity of bloody purulent discharge in the vagina which had escaped from the external os. In a large percentage of cases a thorough washing of the uterine cavity, packing the same with iodoform-gauze, and then stitching the external os will prevent this purulent fluid from escaping into the vagina during our handling of the tumor. Then thoroughly washing and even scrubbing the vagina with a brush and packing the same, including all its cul-de-sacs, with iodoform-gauze, will give us a reasonable assurance that his canal has been made aseptic, and the dangers of infecting the peritoneal cavity reduced to the minimum.

In a conversation with Dr. Bantock, of London, I expressed the hope that in the near future we would be able to remove fibroid tumors with the same low rate of mortality that follows our work in removing ovarian cysts. The good doctor replied: "This can never be done, for the reason that the anatomic conditions are essentially different." Carefully reflecting over this statement, I have become thoroughly convinced that a more thorough study of the essential anatomic conditions that exist in an abdomen containing a fibroid tumor, as compared with one containing an ovarian cyst, would enable us to

bring the mortality of the two operations to something approximating equality.

I have a number of times left the greater portion of the uterine arteries remaining in the pelvis of the patient, but from the results I had I was thinking that the possibility of infection through the rich chain of lymphatics at the side of the uterus was greater in such cases than when the broad ligaments were thoroughly constricted by ligature all the way down to the opening in the vagina. This led me to express, in the Chicago lecture already referred to, my preference for cutting around the cervix rather than enucleating it. But carefully reflecting upon the statement of Dr. Bantock, that the anatomic conditions are essentially different in fibroid tumors from what they are in ovarian cysts, I have also become convinced that we often charge the fault to the technique which we have used in treating the pedicle, when the cause of death ought to be explained in some other way. For example, when the parietes of the abdomen are rendered thin by the pressure of an ovarian cyst, the blood-supply is reduced so that all the intra-abdominal viscera are more or less anemic. This condition is in marked contrast with the hypernutrition often present in and about the pelvis which contains a fibroid tumor. I am quite sure that deaths occur in consequence of our losing our heads in the determination to make the pedicle and all pertaining thereunto as perfect as possible, and neglecting perfect approximation of the abdominal incision always as long as the tumor, including its peritoneum. I have many times cut through two inches of fat to reach a fibroid tumor, and unless such a wound be thoroughly closed by three rows of sutures, the internal one being of fine silk, with stitches not more than one-fourth of an inch apart, and then making absolute sero-serous approximation, there is danger of infecting the peritoneal cavity by discharges leaking into the abdomen. Too often we take extreme precautions to nicely adjust the outer integument, when it would be better, if any leakage from the wound is to occur, that it shall pour outward and not inward. Again, the more vascular condition of the peritoneal cavity and its contained viscera, in cases of fibroid tumors as compared with ovarian cysts, warns us of the greater intolerance of rough manipulation, making it necessary to protect intestines and viscera as much as possible during operation by hot sterilized towels or sponges, by temporarily bringing the wound together over the intestines with a temporary stitch or volsella, and, *above all and over all*, by the *most thorough irrigation* of the peritoneal cavity with water at a temperature not less than 110°, we should wash out, not only after the work has been completed, but at intervals during the work, so as to undo the harm we do to the vasomotor nerves distributed to the pelvic and abdominal viscera. Half a dozen pitcherfuls of water are none too many, and if we have produced material shock, as evidenced by the pulse, a few pitcherfuls of water poured through the drainage-tube and allowed to pass out again have at times, as I believe (*permit me to say, I absolutely know*), saved lives that otherwise would have been lost. The operator of to-day who seeks to do away with the "wash-out" and the drainage-tube on all occasions, on theoretic grounds, is rolling the wheels of progress backward. The skilful management of a patient during shock is of very great importance, indeed. The use of opium to put

the disturbed tissues at rest has the genuine ring of surgical wisdom. The use of strychnin to keep up the tone of the nerves distributed to the intestinal tract, and thereby counteract the tendency to gaseous distention of the bowels, is one of the precious comforts to the anxious abdominal surgeon when his patient is low in shock.

When Ephraim McDowell did his first ovariectomy the citizens surrounded his house, threatening his life because he was about to "butcher a woman." The sheriff of the county interfered. At first they refused to listen to his pleadings for the Doctor's life. Finally he struck a compromise, the mob agreeing to let the Doctor alone if the woman recovered, the sheriff agreeing not to interfere with the mob if the woman died. This was a crucial test of the Doctor's heroism. Other heroic surgeons for years did not hesitate to remove ovarian cysts, but allowed women to pass on to their graves if the diagnosis convinced them that the trouble was a fibroid tumor. Still later, surgeons removed fibroids if they were pear-shaped and a pedicle could easily be found, allowing women to pass on to their graves if the examination showed the tumor to be deeply imbedded in the pelvis by nodular masses. Even the great and noble Dr. Thomas Keith, after battling with fibroid tumors with as good a percentage of recoveries as anyone at that date, finally abandoned myomectomy, resorting to the use of electricity, and only wished that he had back from their graves the patients that had died from his operations for fibroids. Thank God, there were others to take up the work when he became discouraged. The old adage that the qualifications of a surgeon are "the head of an Apollo, the eye of an eagle, the heart of a lion, and the hand of a woman," is eminently true, especially as regards him who would seek to be successful in removing fibroid tumors. The head to plan and to meet the surprises which spring on us during such work; an eye to see quickly the exact constriction of every ligature and adjustment of every suture; the lion's heart to press forward in this aggressive work, when our percentage of recoveries might be better if we would let fibroid tumors alone, especially bad ones; the nimble wit in the end of the fingers, backed by an indomitable will to skilfully and speedily perfect the adjustment of the last suture with the same precision as the first, make a combination of qualifications suggesting that the surgical type of a man is not to be found thirteen times in a dozen.

No other operation so thoroughly demands that the trinity of surgery be carried out—thorough preparation of the patient, thorough operating, and skilful after-treatment. As American surgeons, we have a right to be proud that no nation leads us in the originality of methods or successful results in removing fibroid tumors. Almost every State of our Union has operators who would venture to give a woman with a fibroid tumor the chances of life which surgery offers.

With a more thorough and perfect understanding of the essential anatomic conditions which make an abdomen containing a fibroid tumor different from one containing an ovarian cyst, with the realization of the ideal method applicable alike to all fibroid tumors, regardless of their morphology—a method as successful in the hands of the many skilled operators as the few—may we not hope to say, with all sincerity, that fibroid tumors

can be removed with the same low rate of mortality which has placed ovariectomy among the brilliant triumphs of the century. Then shall the torch lighted by McDowell in the midnight darkness shine forth with resplendent glory in this brilliant noonday of abdominal surgery. The century, which in a few years will have rolled on to the eternal past, has placed in the magnificent temple of medicine many pillars of surpassing beauty and grandeur, while its surgical columns have risen high toward Heaven, where as gilded towers they fain would vie with the God-given sunshine in dispelling the chill and gloom of human agony.

Chirurgia's tower, thy lights resplendent blaze,
Dries woman's tears and lengthens out her days.
McDowell and Sims, of our Columbia's clime,
Began the work, moved onward, nigh sublime.
To woman, then, these blessings shall be given,
Queen of the home, and home the type of Heaven.

Abdominal surgery is proud of her past because it is prophetic of her future. Even now, in the vital present, it shall stand forth unchallenged as the crowning glory of all science and of all art.

CLINICAL MEMORANDA.

LAMINECTOMY FOR FRACTURE OF DORSAL VERTEBRÆ.

BY CASPAR W. SHARPLES, M.D.,
OF SEATTLE, WASHINGTON.

THE case forming the subject of these notes is reported to add to the scant collection of such cases, and to offer a small degree of encouragement for operation upon similar ones. The case and its progress show only a partial success; it was operated upon by me through the courtesy of Dr. D. A. Mitchell, of this city.

C. B., twenty-eight years of age, on May 8, 1893, was injured in a peculiar manner. A very small steamboat was suspended by a rope passing under her stern and attached to the machinery of a pile-driver; the boat was raised so that a man could pass under it in a row-boat. While the patient was at work under her in this way, the rope broke and the steamboat fell on him, doubling him up in the boat, and sinking him and the small boat under the water. As he came up he caught the side of the boat, and thus was saved from drowning. His legs were paralyzed at this time and the pain around his body was intense.

On the next day I first saw him, and found complete paralysis of both motion and sensation from the waist down. The line of separation between esthesia and anesthesia was at the eleventh dorsal vertebra. The bladder and bowels were paralyzed. The pain was intense around his body, and it was aggravated very much by motion. The fracture was very evident by reason of lateral motion and the detection of the fragments at the eighth dorsal vertebra, although the swelling was very great. Blood was extravasated over a very large area, and, on opening the tissues, the clotted blood rolled out; so extensive was the fracture as to separate the tissues, so that it was not necessary to dissect them from the laminae. The lower fragment of the column projected an inch posterior to the plane of the upper one.

To see the condition of the dura, and, if advisable, of the cord, the laminæ of three vertebræ were removed. The dura was found intact; the cord was bent at quite a sharp angle; pulsation was absent. On the under side of the cord were several small fragments of bone pressing upon its anterior surface. These were removed, together with a portion of the body of the eighth dorsal vertebra as large as a cube three-fourths of an inch in size. This was found free. Blood-clots were numerous in the canal.

The tissues were found to be separated from the anterior surface of the bodies of the vertebræ, so that a finger could be passed around. The dura was not opened. An attempt was made to fasten the bones in position by wiring, but this was futile. Free drainage was provided for. On account of the inability to dress in a plaster cast at once, long wooden splints were fastened around the man's body. For a few days the temperature was quite constant at 101° , rising once or twice quite suddenly. The day following the operation he spoke of a tingling in his feet, and on the next day there was a desire to urinate. The man passed a few drops voluntarily and said that he could tell when his feet were touched.

The subsequent history is as follows: Paralysis has been constant and complete. A spastic condition of the muscles of the legs has developed, which is more marked on the right side. The skin-reflexes generally are exaggerated, though the cremasteric reflex is about normal. Anesthesia has been and is complete from a line drawn around the body on a level with the crests of the ilia and extending down to two inches above the symphysis. The line of demarcation is sharp and has descended since the operation. Control of the bladder and rectum is gone. The patient thinks that at times he feels a desire to urinate, but this may not be so. He suffers no pain. Two small bedsores have formed over each trochanter, but are now becoming smaller. There is a small fistula in his back and the back is stiff. He can sit up, though he rarely does this, being more comfortable lying down. The general nutrition has been good all along and he has gained flesh.

In attempting the operation, I, of course, realized that the mortality-rate was high, yet Phelps has stated that the mortality-rate of the fracture from crushing or bending is the highest, and such cases are, therefore, less desirable for operation, as the cord, too, has been crushed.

The mortality of fracture of the spine is large. Agnew reports seventy-three cases treated at the Pennsylvania Hospital, of which forty-seven died in the house, seventeen were removed, and no doubt subsequently died, one was cured, and eight were unrecorded, so that probably only one case out of seventy-three recovered. Ashhurst has analyzed sixty-one cases in which operations were performed, giving a mortality of 73 per cent., and only three cases of fair results. He condemns the operation except for exceptional cases.

In cases that are not operated upon, Cooper and Séguard give the mortality as 99 per cent., and Erichsen has said that all cases are fatal, while Ashhurst gives the mortality at from 61 to 78 per cent., according to the seat of the injury. It would not be just to compare the results of operations for disease of the cord and those for fracture, performed either at the time of the injury

or later. Many cases that do not die as the immediate result of the injury die later of myelitis and its consequences. This is due to the traumatism or hemorrhage of the cord. The injury of the cord may be caused by compression at the time, or by constant compression from the deformity, or from spicules of bone. To overcome this possible condition is the indication, and this can be better done by an operation than in any other way. Should a fragment of bone be pressing on the cord or into its substance, it can be removed, which removal would diminish the dangers of secondary inflammatory action. These facts I offer as the one reason for the operation.

The dura was not opened in my case, for I could not see how any possible good could come of it. Should the cord be injured, it was from compression and crushing, and for this nothing could be done.

There is yet another point to be met, and that is the time of operation. It is easy to see that every hour of delay after the patient attains a state to warrant an operation is so much added to the dangers of secondary inflammatory action; and so it seems to me that, if an operation be justifiable, it should be done as soon as there is recovery enough from shock to justify it. In many of the cases of which I have seen accounts, the operation has not been performed till late, and then it could not be of the same value as if performed early. The mere operation, while adding to the gravity of the case, is usually recovered from. It should be remembered, however, that even a late operation may favorably change the conditions.

Most favorable cases have been those in which only the laminæ have been injured, and Ashhurst recommends that only such cases should be operated on. These are the cases that, if let alone, would make a recovery, and if the operation be restricted to those cases, practically the indications for the operation are not met. I think, however, that it is better to operate on cases of injury to the laminæ than to take the chance of a spicule of bone in the cord.

In cases like the one reported, the best that could have been hoped for would have been a fibrous union between the bodies of the contiguous vertebræ, and even this would not have been enough to permit any very extensive use of himself by the patient. Yet judging from the standpoint of human life, this man is now alive and free from suffering, while, had he not been operated upon, considering the extent of the injuries, he no doubt would have died, though even now he is only a helpless cripple.

THE IDENTIFICATION OF THE LARGE AND OF THE SMALL INTESTINE.

BY J. CHALMERS DA COSTA,

OF PHILADELPHIA.

DEMONSTRATOR OF SURGERY IN JEFFERSON MEDICAL COLLEGE.

IN abdominal operations it is frequently imperatively necessary that we recognize with certainty the large intestine or identify positively the small bowel. The size of the tube will not always help us in this recognition, as a small intestine may be enormously large because of distention, and a large intestine may be contracted to the size of a finger because of obstruction above.

The longitudinal muscular fibers of the large bowel are accentuated in three portions, and these accentuations constitute the three longitudinal bands which begin at the cecum, and terminate at the end of the sigmoid flexure of the colon. Each band is composed of a number of shorter bands, and the shortness of these constituent bands permits the sacculation of the large intestine. Longitudinal bands and sacculations are not met with in the small gut, and we have in their presence or absence a means of identification in many cases; but when the colon is much distended the bands cannot be seen, and the sacculations disappear. (Edmund Owen.) From the large intestine only spring the appendices epiploicae, small overgrowths of fat in pouches of peritoneum, but these appendices are sometimes not well marked, except upon the transverse colon, and when emaciation exists they may almost entirely disappear.

The relatively fixed position of the large intestine and the free mobility of the small bowel are important points of distinction. The foregoing statements indicate that it is not always easy to distinguish between colon and small gut, and that according to old rules it may often be necessary to make large incisions, to look as well as feel, and to extensively handle the bowels. Any scrap of knowledge which will shorten an abdominal operation, which will permit of as certain work through a smaller incision, and which will diminish handling of intraperitoneal structures, must tend to increase the chances of recovery.

For these reasons I wish to suggest a method of bowel-identification, which rests upon the fact that each bowel has a posterior attachment, and that the origin of the attachment differs according to the bowel which it supports, that a single finger can detect the origin of the peritoneal support of any section of the bowel, and this origin being known, the portion of bowel which it supports is with certainty deducible.

In an exploratory operation, for instance, the finger comes in contact with the bowel; in order to determine whether it is a large or small bowel, note first if the structure is movable or firmly fixed; next pass the finger over the bowel, and let it find its way posteriorly. If we are dealing with a small bowel the finger will reach the origin of the mesentery between the left side of the second lumbar vertebra and the right sacro-iliac joint; if we are dealing with the large bowel, the finger will reach the origin of the meso-colon, or the point where the colon is fixed posteriorly and to the side.



In an operation we may wish to find at once the large bowel. In operating for appendicitis, after making the incision (I in illustration), carry the finger along the parietal layer of peritoneum (first outward, then backward, finally inward, as shown by the dotted line in the illus-

tration); the first obstruction it meets is the colon. The head of the colon is found by passing the finger downward, and the appendix is readily detected, usually internally and posteriorly. Professor Ashton, of the Medico-Chirurgical College, has kindly tried this plan in several cases of appendicitis, and he tells me it greatly simplifies the finding of the large bowel and the appendix.

In the operation of iliac colostomy the same plan can be pursued. The incision is made upon the left side, and the finger follows the parietal peritoneum outward, backward, and inward. The first obstruction it meets with is the descending meso-colon.

This method of differentiating between the large and small bowel is so simple that the writer hesitates to record it through the conviction that it must already be known; but having demonstrated it repeatedly in the surgical laboratory at Jefferson College, without having it claimed as old knowledge, and being unable to find it in text-books, it may seem proper to describe the plan, and to urge that it be tried by abdominal surgeons.

MEDICAL PROGRESS.

Changes in the Colostrum and Milk of Nursing Women induced by Disease.—As the outcome of an analytic study in a moderate number and range of cases, LUDWIG (*Archiv für Gynäkologie*, B. xlvii, H. 2, p. 343) has found that the amount of fat contained in the milk of nursing women is considerably increased in cases of tuberculosis (when any secretion of milk takes place at all), while the remaining constituents undergo no noteworthy change. In case of albuminuria, particularly if the amount of albumin lost is large, and also if the amount of albumin is small if the nutrition is also impaired, the amount of proteids in the lacteal secretion is notably diminished and the amount of sugar is slightly diminished. In case of profound anemia following hemorrhage in the course of labor the lacteal secretion is deficient in solids, in fats, and in sugar. In case of marked pyrexia the amount of solids and of fats falls, while the amount of proteids and sugar is variable. The milk of syphilitic nursing women was found to be poor in solids, in fats, and in sugar, while the amount of proteids was variable.

Cystinuria in Four Members of One Family.—PFEIFFER (*Centralblatt für die Krankheiten der Harn- und Sexual-Organen*, Bd. v, H. 5, p. 187) has reported the case of a family in which the father and several paternal uncles were gouty, while all of the children, two daughters and two sons, presented cystinuria. This condition was observed in the eldest sister after the passage of a cystin calculus, following an attack of renal colic. She had long suffered with cystitis and pyelitis, but the cystinuria was not discovered until an examination of the calculus led to an investigation of the urine for its presence. Some time after the passage of the stone cystin could no longer be found in the urine. The urine of a younger sister and of two brothers also contained cystin, while that of the mother and of the father, as well as that of two children of the eldest daughter, did not.

For the Sterilization of Sponges, either new or soiled by use, CONTEJEAN (*Compt. rend. hebdom. des Séances de*

la Soc. de la Biologie, 1894, No. 11, p. 290) recommends the following mode of procedure: The sponges are first washed with soap and water, then immersed for some time (even for half an hour without harm) in a 1 to 5 solution of nitric acid, then washed in a 2 per cent. solution of sodium bicarbonate (first heated and then cooled), then immersed for an hour, and well stirred, in a 5 per cent. solution of carbolic acid heated to a temperature of 158°. The sponges may be kept in the carbolized solution, or they may be dried by heat. Before being used, any fluid that they contain should be expressed, and they should be placed for several hours in a saline solution, 7 parts to 1000.

The Relation between the Gastric Juice and Intestinal Putrefaction.—As the outcome of a special investigation, MESTER (*Zeitschrift f. klin. Medicin*, B. xxiv, H. 5, 6, p. 441) has found that under normal conditions intestinal putrefaction is induced as a result of the action of putrefactive microorganisms introduced into the digestive tract in large measure with the food, and in a degree inversely proportionate to the activity of the hydrochloric acid of the gastric juice. It is thus increased with a diminution in the hydrochloric acid, and this becomes evident when meat relatively free from putrefactive organisms is used as food; while, when the proportion of hydrochloric acid in the gastric juice is normal, similar conditions of the food are without influence upon intestinal putrefaction.

Gastroplication is the term employed by BRANDT (*Centralblatt für Chirurgie*, 1894, No. 16, p. 361) to indicate an operation for mechanically correcting abnormal dilatation of the stomach, especially when no organic cause for the condition can be found. The procedure consists in exposing the viscus and folding and suturing the peritoneal and muscular coats of the anterior and posterior walls of the stomach upon themselves. A case is reported in which the operation was successfully performed.

THERAPEUTIC NOTES.

Fatal Intoxication with Medicinal Doses of Creosote.—ZAWADZKI (*Centralblatt für innere Medicin*, 1894, No. 18, p. 401) has reported the case of a woman, forty-two years old, who for a few weeks had complained of a dry cough, with sharp pains in the right side of the chest, for relief from which creosote had been prescribed in doses of six drops thrice daily. Soon after having taken the third dose the woman felt pain and difficulty in swallowing, with hoarseness, and shortly abdominal pain, vomiting, diarrhea, and irritative cough were superadded. Weakness was a pronounced manifestation. Frothy saliva was constantly being ejected, and the breath had a distinct odor of creosote. There was in places a cloudiness of the epithelium upon the lips, the soft palate, and the pharynx. The soft palate was paretic, and, together with the root of the tongue and the posterior pharyngeal wall, anesthetic and analgesic. The vocal bands were paretic, the patellar reflexes normal, the entire left arm, the left hip, and the outer aspect of the leg, analgesic. Upon the right side of the chest posteriorly there was slight impairment of the pulmonary percussion-resonance, with roughness of the respiratory

murmur and numerous moist and dry râles. The action of the heart was feeble, the pulse small and compressible. The urine contained a considerable quantity of albumin, together with tube-casts, but the presence of creosote could not be detected. Despite supporting treatment, collapse set in at the end of six days. Upon post-mortem examination two small oval ulcers with white bases, as if eroded, and with undermined margins, were found in the upper fourth of the esophagus; similar ulcers were also found at the pylorus. The mucous membrane of the stomach and duodenum was injected, reddened, and ecchymotic. The liver was cloudy and clay-colored on section. The kidneys were in a state of acute inflammation. There were numerous pleural adhesions, and the whole left lung and the lower lobe of the right lung, together with the brain and meninges, were hyperemic. The middle lobe of the right lung was in a state of interstitial hyperplasia. There was besides a verrucose endocarditis affecting the leaflets of the mitral valve. The spleen was cyanotic, and the endometrium was hypertrophied.

The Treatment of Syphilis by Hypodermatic Injections of Mercurials.—As the result of an elaborate collective investigation, WOLFF (*Therapeutic Gazette*, vol. xv, No. 5, p. 309) has determined that the treatment of syphilis by hypodermatic injections of mercurials is largely employed on the Continent of Europe, except in France. The best preparation is the corrosive chlorid, and next in order the mild chlorid, then the salicylate, the yellow oxid, the sozoiodolate and gray oil. Soluble preparations are to be preferred to insoluble ones. The mild chlorid seems to hold the first place as regards rapidity of action and permanence of effect. The duration of the treatment cannot be sharply defined; it should continue until all of the symptoms have disappeared. Untoward effects are uncommon, and especially so with the soluble preparations. Serious complications are to be avoided by the observance of proper care and cleanliness.

For Favus.—The Paris correspondent of the *Medical Press and Circular* is authority for the efficacy of the following treatment of favus. The hair is cut close around the affected parts of the scalp, which are then washed with ordinary soft soap. A compress saturated with the following mixture is applied three times daily:

R.—Thymol 3ss.
Chloroformi f3v.
Olei olivæ f3ij.—M.

As soon as the crusts covering the patches become detached the parts should be carefully epilated, and finally a solution of two parts of tincture of iodine and one of glycerin should be painted once a day over the denuded parts. The treatment extends over a period of a month or six weeks.

For Hemorrhoids.—

R.—Acid. carbolic 3jss.
Acid. salicylici 3ss.
Sodii biboratis 3j.
Glycerini ad f3j.—M.

S.—Inject slowly from 2 to 4 minims into the base of the hemorrhoid.
Practitioner.

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SATURDAY, JUNE 9, 1894.

RATIONAL MILK-CONTROL.

EFFORTS to regulate the milk-supply have been among the most prominent features of modern sanitary legislation. Scarcely any civilized country is without some regulation, although much variation exists as to the standard selected. Milk, being a natural product largely composed of water, is not of constant composition, and rigid control includes usually only the adoption of a minimum percentage of solids. The earlier efforts at analytic supervision are now known to have been seriously in error. The specific gravity alone is no guide, and Wanklyn has pointed out that many a good milk was ruthlessly seized in Paris under the operation of a system in which the lactometer was entirely relied on. Even the earlier methods of analysis, including that developed by Wanklyn himself, failed to give a correct figure for the ratio between the fatty and non-fatty solids, and led to injustice in the practical application of standards.

So rapidly, however, does knowledge, especially in chemistry, progress, that analysts have scarcely succeeded in placing milk-analysis upon an exact basis, when it is learned that its percentage-composition is relatively of far less moment than has been supposed. It is now apparent that milk is an active distributor of disease, not so much through the

practices of skimming or watering (except as the latter process may introduce impure water), but through the specific organisms derived from the animal or from the surroundings of the dairy. The great importance of these dangers can scarcely be over-estimated. Milk being the only animal food generally eaten in the raw state, it is plain that unless collected under circumstances of extreme cleanliness, it will be most dangerous. The employment of new methods of diagnosis, especially the use of tuberculin, has shown that a large proportion of dairy cattle is subject to tuberculosis, and constantly distributing this disease, in addition to which we have the liability of conveyance of typhoid fever, diphtheria, scarlet fever, etc., from the persons associated with the dairy-work. In the face of such dangers, discussion as to whether the legal limits for the composition of milk should be twelve or thirteen per cent. of solids, and nine or nine and one-half per cent. of non-fatty solids, seems puerile. These limits still form the principal features upon which many boards of health rely, but it is obvious that as tuberculosis is quite as abundant, if indeed it is not more so in high-grade cattle, mere richness is no guarantee of wholesomeness in milk.

The sanitary regulation of milk-production, therefore, including supervision of the water-supply, health of farm-hands and families, condition of cattle, facilities for keeping, transporting, and distributing milk, is the method by which the community will be protected, and under such systems serious adulteration will not be possible. The routine analytic work of a city or State sanitary bureau will throw very little light on the dangerous adulterations of milk. To establish complete supervision will undoubtedly involve the appointment of a "swarm of office-holders," who may "harass the people and eat out their substance," yet such supervision ought to be secured.

The title of this article is suggested by a circular issued by a commission of physicians in Essex County, N. J., which seems to point out the road to proper supervision, without the drawbacks of official methods. This commission has entered into a contract with the owner of a dairy who agrees to permit rigid inspection of his property, animals, and work-people; to furnish samples as required for analysis; and to allow publication of all results. The commission has no pecuniary interest in the results, and it is naturally expected that physicians will encourage such a system. The circular at hand, dated

March 6, 1894, details two analyses and inspections made during the latter part of February.

There can be but little doubt of the advantage of this system over compulsory inspection by officials secured under our present political influences. By encouraging honesty and progressiveness on the part of dairy-farmers much more is accomplished than the protection of the milk itself; the example is fruitful, and will influence other features of trade and commerce. It is true of "that monster, Custom" that "to the use of actions fair and good, it likewise gives a frock livery that aptly is put on." High as are the proportions to which food-adulterations and other systematic dishonesties have risen, something may be accomplished in the way of reform by moral suasion, and by encouraging honesty by publicly rewarding it. It is to be hoped that the milk furnished under the conditions enumerated will, as it should, secure a little higher price, and this fact, if no other, may induce other farmers to seek admission to the supervision, until all important dairies near our large cities may by amicable agreement be prepared to furnish safe milk. It should not need argument to convince anyone that such a result will be far more satisfactory than compulsory control over unwilling and insincere proprietors.

Some incidental points in the circular deserve criticism. It is universally acknowledged that the practical purposes of milk-analysis are met by a determination of the total solids and fat; by subtraction of the latter figure from the former the so-called solids-not-fat are obtained which give the valuable clue to the presence of added water. Slight variations of sugar, proteids, and ash, although of scientific interest, have no known sanitary significance, and it is pedantic to include determinations of them in an analysis intended for general circulation. It is somewhat surprising to see the determinations carried out to the third decimal place when the processes of analysis are scarcely exact to this point. Moreover, in the two analyses given in the circular the figures of the individual items—fat, proteids, sugar, and ash—sum up to the exact figure for the total solids, a result that must be either merely a coincidence or indicates that some datum has been determined by arithmetic and not by actual experiment. If the latter is the case the fact ought to be indicated.

Control of the milk-supply, as far as the detection of watering and skimming is concerned, can be secured by simple and rapid methods, and the intro-

duction of elaborate routine should be discouraged as involving unnecessary expense. The large business of the Aylesbury Dairy Company, of London, has been controlled in the most satisfactory manner for many years, the last report of the chemist showing that during 1893 over twenty-eight thousand samples of whole milk, and nearly two thousand samples of cream, buttermilk, and skimmed milk, were analyzed in the company's laboratory, in which but two chemists are engaged. The analyses were almost exclusively limited to determinations of two of the three data—fat, specific gravity, and total solids—it being possible from any two of these to calculate with close accuracy the third. In the numerous prosecutions for violation of laws regulating the sale of milk it has been the almost invariable custom to omit determinations of sugar and proteids. The determination of ash is easily made, and is often included when watering is suspected. In milks obviously of good quality, such as those exhibited in this circular, even the figure for the ash is redundant.

The importance of the foregoing criticisms lies in the fact that in endeavoring to extend the system of voluntary non-official dairy-inspection like this Essex County case, the question of expense will be one of the most serious obstacles, and everything should be done to simplify the routine. Processes of milk-analysis accurate to within one-tenth per cent., costing less than one cent per sample, requiring no high analytic skill, and but a few minutes, are known, and the results, fat and total solids, are the analytic data that the interests of public hygiene need. Questions of effects of feeding, breeding, season, etc., may be left for the experiment-stations or the private laboratory, in which the more extended analyses may be made.

SOCIETY PROCEEDINGS.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

(Continued from page 624.)

Third Triennial Meeting, held at Washington, D. C., May 29th, 30th, 31st, and June 1st.

THIRD DAY—MAY 31ST.

DR. WM. M. POLK, of New York, read a paper on "The Conservative Surgery of the Female Pelvic Organs." His deductions were based upon a study of 164 cases in which he had performed abdominal section for disease of the appendages. Of these, 64 were operated upon by the radical method and 100 by so-called con-

servative measures. By the term conservative was meant the retention of all tissues having a reasonable chance of adding to the local or general well-being of the individual. Conservative surgery is applicable to traumatisms, non-malignant disorders, and the early stages of infectious disorders of the female pelvic organs.

The advisability of conservative operations on the perineum, vagina, and cervix has long been recognized and accepted. In speaking of myomectomy, Dr. Polk took the ground that when the tumors have pedicles or distinct capsules, and their number is not too large, operations for their removal may be indicated. Ligation of the broad ligament has been suggested in order to check the growth and lessen the hemorrhage. This operation seems to be capable of filling a valuable place for these indications. It seems to be better than the operation of oöphorectomy, but as yet our knowledge is insufficient to enable a more definite statement to be made.

One of the most conservative operations is curetting, with the drainage and depletion to be obtained by packing. This is applicable in all forms of endometritis and metritis, whether acute or chronic. In acute or subacute inflammation after abortion or labor, it is of great service if done at once.

In affections of the appendages it may be that efficient depletion can be secured by the cavity of the uterus, and will do much toward effecting a cure. The results should be best in the early stages of salpingitis and oöphoritis, but the chronic cases are not beyond the influence of this procedure. If done properly it is harmless and renders the secondary operation safer. The more Dr. Polk has employed this method of treatment the better has he been pleased with it. Women are better mentally and physically for the maintenance of menstruation and ovulation. Until recently many conditions of the tubes and ovaries were considered adequate causes for their removal. Such is not now the case. The functions of menstruation and ovulation should be preserved when possible, without sacrificing the patient's health or life. In cases of destructive inflammation of the appendages the operation is best done after the subsidence of the acute inflammation. The tendency of these inflammations is in the direction of resolution. There are many cases of occluded adherent tube in which the ovaries are in good condition. The same statement applies to some cases of pyosalpinx and many cases of hemato-salpinx. Dr. Polk's proposition was to remove such tubes and leave such ovaries. The nearer the patient is to Nature's menopause the less is the necessity for such conservatism. In early life it is urgently necessary. Dr. Polk has operated in 45 cases in this way, and in their ability to work and enjoy life the women are in as good condition as any equal number of cases of oöphorectomy. Mentally they are far better.

In 36 cases Dr. Polk had resected ovaries the seat of simple cysts or of blood-cysts; in all but 5 of these the results were entirely satisfactory. In 2 cases there was fresh development, and in 3 suppuration in the cyst occurred as a result of infection from the catgut used. When the tubes have been simply adherent they are released and allowed to remain. Twelve such cases have done well, with the exception of 1, in which gonorrheal infection spoiled the work. When the abdominal

opening of a tube is closed this is opened and the fibrated ring stitched back. Dr. Polk reported 5 cases from his own practice in which women had become pregnant after operations of this character. The precise question is, however, not so much the possibility of pregnancy as it is the mental, moral, and physical influences resulting from allowing the ovary or a portion of it to remain.

In the evening DR. ALFRED L. LOOMIS delivered the President's Address, which was entitled "The Influence of Animal Experimentation on Medical Science." He stated that the specific problems with which medical science deals are questions of the relative influence of multiple forces on the production of given results. Only the deepest ignorance can fail to recognize that the forces concerned in the simplest change of inorganic nature are so numerous and their relations so complex that they defy recognition under uncontrollable conditions, while in the organic world the task is even more hopeless. Experimentation, therefore, in which one or more of the involved forces can be controlled, becomes an absolute necessity in all scientific investigation. However clear the mental analysis, however accurate the logical demonstration from cause to effect, it is possible by experiment alone to prove that no involved force has been overlooked. Is it not strange that medicine should be denied the right to follow those imperative methods of scientific research which are so unquestionably accorded to every other science? It is not a little surprising that men with an appreciation of the necessity of experimentation should for so long have preferred to be its subjects, and that even to-day so many refuse to yield the place to animals. For example, in widespread epidemics we note the effects of an infection on perhaps half a million of human beings, with a great sacrifice of human life. On the other hand we study in laboratories the cause of the epidemics with a comparatively small sacrifice of animal life.

In entering upon the consideration of this subject Dr. Loomis fearlessly laid down this proposition: Every distinct advance, every established principle, and every universally accepted law of medical science has been in the past and will be in the future the direct, if not the immediate, result of animal experimentation. He then passed in review some of the obvious and conclusive proofs of this proposition.

It is not too much to claim that during the latter half of the present century the results obtained from experiments on animals have done more than all the observations of the preceding centuries to raise medicine from conditions of vagueness to conditions of exactness. From the time of Aristotle, who proved that the blood, brain, and spinal marrow in animals have no sensation, down to the present day, animal experimentation has been practised by all investigators who have gained any definite knowledge of the more important phenomena of animal life.

Galen must be regarded as the pioneer in this line of investigation. By his experiments on living animals he showed that arteries contain blood, that the lungs passively follow the movements of the chest, and that the diaphragm, although the most important, is not the only muscle of respiration. Further, by section of the spinal cord and of the recurrent laryngeal nerve he demonstrated

the nervous control of the voice and explained the mechanics of respiration. He also advanced the knowledge of the functions and movements of the alimentary canal, and laid the foundation of our knowledge of the functions of the brain and spinal cord. The results of his experimental work are now as conclusive as when first made, and are the only part of his vast labors which have stood the test of modern investigation.

From Galen's time to Harvey's great discovery little experimental work was done, and during this time medicine ceased to advance. Harvey's demonstration of the circulation of the blood, in 1620, rests entirely on animal experimentation, as is shown by his writings.

The next series of important investigations on animals were applied by Galvani and Volta to the nervous system.

In 1664 Robert Hook, by inflating the lungs of animals by means of a bellows, demonstrated artificial respiration. The experiments of Boyle and of Priestley in the seventeenth century laid the foundation of our knowledge of the respiratory process.

The injection of fluids into the bloodvessels of animals was first done by Dr. Christopher Wren. In 1666 Richard Lower performed the first transfusion, and the following year Dr. Denis performed the same experiment on man.

In the middle of the eighteenth century Haller proved that all motion in the human body proceeds in great measure from the brain and spinal cord. He also demonstrated that irritation of the peripheral end of a severed nerve causes contraction in the muscle to which it is distributed. This was followed by the experiments of Sir Charles Bell. At the beginning of the present century Magendie demonstrated the difference between the anterior and posterior roots of the spinal cord. His experiments on animals, by the injection of various medicinal substances, enabled him to lay the foundation of the doctrine that remedies exert their action upon special structures and organs. In this line of work he was followed by Claude Bernard. It is perhaps a conservative statement that, excluding medicinal foods, 90 per cent. of all our medication is made definite and valuable by this principle alone. Magendie, Bernard, and Loget established by their experiments the doctrine of recurrent sensibility, and this was followed by the discovery of Marshall Hall of reflex action of the spinal cord. The doctrine of vasomotor action was practically demonstrated by Bernard's experiments.

John Hunter, in 1785, by his experiments on dogs, established the fact that injuries to healthy arteries are soon repaired, and that ulceration after ligature occurs only when the vessel is diseased. These experiments led him to apply ligatures for the cure of aneurism to healthy portions of the arteries. Hunter first learned by experiment on pigeons and young pigs that the growth of bone is from the periosteum.

As we witness some capital operation performed at the present day without pain, almost bloodless, followed by neither fever nor suppuration, we may ask how far these results are due to experimentation on animals. The effect of chloroform was discovered through experimentation on the ant. Simpson practised and perfected his use of chloroform on animals before he placed his first patient in a state of anesthesia. That other great alleviator of pain was first used on dogs.

These results are sufficient to exalt animal experimentation to the first place as a means of scientific advancement.

The first important step in the field of etiology, based on animal experimentation, was made in 1850, when it was proved that splenic fever could be communicated from animal to animal by inoculation, and the first hint of bacteriologic study was given by the discovery constantly in the blood of these animals of little thread-like bodies.

About the same time Virchow made his observations on trichinosis.

Villemin inaugurated an important era when he established the fact that tuberculosis was an infectious disease. The invaluable studies of Pasteur introduced us into a new world of knowledge. He not only obtained pure cultures of organisms, but also studied their life-history and placed bacteriologic science on a firm basis. The crowning glory of Pasteur's work came with the discovery of attenuation of bacterial toxic products. It is not possible to point to a work of richer or grander promise, yet it is a work that was possible only by experiments on living animals. The application of Pasteur's doctrine by Mr. Lister to the antiseptic treatment of wounds has been a full confirmation of this principle.

The discovery of the bacillus tuberculosis by Koch marks another brilliant epoch in medical science.

Within the past two decades animal experimentation has accomplished more in the field of cerebral localization than all the preceding centuries of carefully recorded cerebral symptoms studied in the light of post-mortem investigation. It has opened a new field of operations.

From this history, it seems evident that most, if not all, of the real advances in medicine have been made possible through experimentation. This review of what our profession has done is not a plea for mercy—it is a cause for pride. Until infinity repeals the edict which gave man power over all created things, the right to claim the services of the brute can never be denied him who devotes his life to the service of mankind. We glory in our experimental work because we know the tenderness of cruelty, the balm of pain, the life whose birth is only in the throes of death. From the ignorant we expect to receive only censure, but from those who in the valley of the shadow of death have learned to know what manner of men we are, I have faith to believe that the reply will come, "We have trusted you with the lives of our loved ones, we intrust to you God's dumb creatures."

FOURTH DAY—JUNE 1ST.

At the business meeting, DR. NEVINS B. HYDE presented on behalf of the American Dermatological Association the following resolution, which was adopted:

Whereas, The American Dermatological Association recognizes the importance of the undoubted existence of leprosy in North America; therefore,

Resolved, That the Congress of American Physicians and Surgeons be requested to memorialize the Congress of the United States of America with the view to the appointment of a commission of five to investigate the prevalence of leprosy in the United States of America and in the countries upon its borders, and to suggest means for the control of the disease.

DR. WILLIAM H. WELCH, of Baltimore, stated that a bill had been presented in Congress prohibiting experiments on animals in the District of Columbia, and he presented the following resolution, which was adopted:

Whereas, The attempt in other countries to regulate by legislation the practice of experimentation upon animals has proved most disastrous to the progress of medical science and art,

Resolved, That the Congress of American Physicians and Surgeons enters its most earnest protest against any legislation tending to interfere with the advancement of medicine by means of experimentation upon animals conducted by properly qualified persons.

DR. L. McLANE TIFFANY, of Baltimore, offered the following resolution, which was adopted:

Whereas, The Army Appropriation Bill reduces the number of medical officers in the army by twenty-five, and also reduces the appropriation for the Library of the Surgeon-General's Office from \$10,000 to \$7,000,

Resolved, That it is the opinion of this Congress that these proposed reductions are unwise and are contrary to the best interests not only of the Army, but of the medical profession of this country, and of all who depend upon them for skilled professional services, and that we respectfully request our Representatives and Senators to so amend this bill as to prevent the reductions above referred to.

The question of amendment of the By-law relating to the place of meeting was brought up and its consideration postponed until the next meeting, when it should be made the special order for the first day's session.

The Congress then proceeded to its scientific work. The first portion of the afternoon was under the direction of the American Laryngological Association, and the subject for consideration was the Surgery of the Accessory Sinuses of the Nose. The first paper was on "Diseased Conditions of the Ethmoidal Sinuses," by DR. F. H. BOSWORTH, of New York. He said that diseases of these sinuses differ from diseases of the other sinuses in the anatomic peculiarities and in their symptoms. In the other sinuses there is a single large cavity, while in the ethmoid there is a mass of small cells more or less completely separated from each other. In order to establish a radical cure it would be necessary to open each one of these cells. This is impossible, and therefore the separating walls must be broken down and a single cavity formed.

In affections of the other sinuses the principal symptom is the occurrence of a purulent discharge, while ethmoidal disease sets up a train of symptoms more or less neurotic in character, such as headache, intra-orbital pressure, sneezing, asthma, and interference with the action of the brain. Ethmoidal disease is more frequent than is commonly supposed. There are three varieties of disease of the ethmoid: the extra-cellular myxomatous, the intra-cellular myxomatous, and purulent ethmoiditis. These varieties are really simply successive stages of one and the same affection. As the disease progresses the mucous membrane may project into the nasal cavity in the form of small polypi. Another result may be a crowding out of the middle turbinated bone, from distention of the ethmoid cells. The final result is suppuration, and the pus may be discharged through the anterior or through the posterior cells.

Treatment in these conditions should be instituted early, if possible before the occurrence of suppuration. In acute ethmoiditis the ordinary measures employed in acute rhinitis are indicated. Of all measures the douche is to be regarded as the most valuable. One or two gallons of water, rendered saline and as hot as can be borne, should be passed through the nose twice daily. This is devoid of danger, provided the patency of the nostrils is determined beforehand and the water is passed in the narrower nostril so as to obviate any interference with its discharge.

In the chronic stage surgical treatment is demanded when other measures have failed. The object of the treatment is to relieve the intra-cellular pressure. To remove the projecting portions the snare answers the purpose best. In operating on the ethmoid cells a small burr attached to a dental engine is the best instrument. The operation usually requires several sittings, and care must be taken on account of the thin bone separating the cavity from the orbit and from the brain. The operation is not especially painful and can be done under the application of cocaine.

Of 97 cases of ethmoid disease, 3 presented carcinoma and 1 sarcoma. Of the simple inflammatory cases, 15 in number, 9 were cured, 3 improved, and 3 disappeared. There were 29 cases of myxomatous degeneration, of which 12 were cured, 10 improved, and 7 were seen but once or twice. There were 22 cases of myxomatous change, with polypi; 9 were cured, 10 improved, and 3 disappeared. There were 27 suppurative cases; 8 were cured, 12 improved, and 7 disappeared. In nearly all of these cases radical measures were employed.

DR. J. H. BRYAN, of Washington, read a paper entitled "Surgery of the Maxillary Sinus." He said that of the surgical affections of the antrum empyema is the most important, and the principal question that has arisen in regard to its treatment has been as to the method of opening the cavity. The washing out of the cavity through the natural opening has been strongly advised. This is applicable to acute but not to chronic cases, and the results are uncertain. In the majority of cases an artificial opening is necessary. If there is a carious tooth present it should be extracted, and frequently in this way the cavity will be opened; if not, it will be necessary to establish a communication by a trocar or small trephine propelled by an engine. The opening should be large and a metallic drainage-tube introduced. If the anterior wall of the antrum shows signs of weakening the opening may be made at this point. If it is desired to enter the cavity from the nose it may be done through the inferior meatus by a spear-shaped knife, but it is better to use the trocar or drill. After the cavity has been opened it should be washed out with mild antiseptic solutions.

When the case is an obstinate one, the opening should be enlarged so that the cavity may be thoroughly explored with a probe, the little finger, or the endoscope. This will often show the presence of spots of ulceration, necrosis, supernumerary teeth, etc., as the cause of the trouble.

DR. J. N. MACKENZIE, of Baltimore, also called attention to the various methods of opening the antrum. Washing out through the natural opening is not applica-

ble to many cases, for it is often difficult to find the opening and this is so even after death. In order to obviate this difficulty, it has been proposed to remove the inferior turbinate bone, but this procedure does not seem justifiable in the majority of cases. It has also been proposed to make an artificial opening below the natural opening. This is rather difficult to accomplish, and the hemorrhage is sometimes great. The operation of entering the antrum through the canine fossa should only be performed in cases of growths, or when the wall of the antrum is so thin that it is an easy matter to pierce it, and when, if the surgeon does not make an opening, the antrum will discharge spontaneously. By far the best operation for gaining access to the antrum is that through the mouth, by the extraction of a tooth, whether sound or decayed, or by going through the alveolar process without the extraction of a tooth. Dr. Mackenzie considers this method far superior to any other. The opening thus made furnishes drainage from a dependent point, and when injections are made through the opening, most of the fluid escapes through the nose. The objections that have been urged against the operation are that it involves the loss of a tooth, perhaps sound, that food may enter through the tube, and that there is danger of microbes gaining entrance from the mouth. These objections are, however, without weight. There is only one contra-indication, and that is the presence of an edentulous alveolar process. In such a case the operation had better be done through the nose.

DR. JOHN O. ROE, of Rochester, read a paper on "The Surgery of the Maxillary Sinuses." He pointed out that the treatment of cases of disease of the maxillary sinuses is largely surgical, on account of the fact that they are largely out of reach of ordinary medicinal treatment. Most cases of *ozena* are, in all probability, due to discharge from some of the sinuses of the nose. In cases in which the discharge does not rapidly subside under treatment, a free opening should be made. If there is no history of long-standing disease, the treatment should be begun with injections through the natural passage. If the case is recent, the discharge persisting after an acute inflammation, this may bring about a healthy condition. When such treatment cannot be employed an artificial opening should be made. When the teeth are sound the opening can be made through the zygomatic region or through the meatus. If the disease does not rapidly subside, it is probable that there are conditions of the cavity which must be dealt with radically. Then a free opening should be made and the diseased conditions removed. The opening should be maintained until the disease is entirely cured. The following conclusions were presented:

The old idea of considering drainage and cleanliness as the treatment, regardless of the exciting cause, should be abandoned. In all cases in which the purulent discharge does not cease after a reasonable time, the cavity should be freely laid open, so that the exact pathologic condition can be determined. The opening should be maintained for inspection and treatment until the disease has been cured.

The second portion of the session was in charge of the American Neurological Association.

DR. JAMES J. PUTNAM, of Boston, read a paper entitled "The Influence of Infectious Processes on the

Nervous System; Pathology and Etiology." He maintained that the relation of nervous diseases to infectious processes may be studied from the point of view of the bacteriologist or that of the neurologist. It was the latter that was taken up. The nervous system may suffer from local bacterial action; from the effects of toxic products; from the effects of a lowered vitality of the nervous system, making it prone to show signs of constitutional weakness or fall a prey to new causes of disease. The term "infectious" was, for convenience, used somewhat loosely to denote the action of specific viruses as well as that of specific organisms.

The infectious diseases that would be admitted by everyone to cause nervous affections are: tetanus, rabies, syphilis, tuberculosis, diphtheria, lepra, gonorrhea, typhoid fever, erysipelas, influenza, mumps; the acute exanthemata, the pyogenic organisms, the *diplococcus lanceolatus*, malaria, actinomycosis, may bring about the same result. The nervous affections that follow acute infectious diseases are not always due to the primary infection; sometimes they result from secondary infection; or they may be only an indirect result.

The diseases of the nervous system which are suspected, but not fully proved, to be of infectious origin, are especially *beri-beri*, poliomyelitis, Landry's disease, certain forms of myositis, neuritis, myelitis, some of the cerebral palsies of children, chorea, disseminated sclerosis, and other cerebral and spinal scleroses, amputation-neuritis, herpes zoster.

Finally, a number of affections follow in the wake of infectious processes, but these are hardly to be considered as indicating the action of specific viruses. Among these are the constitutional neuroses and psychoses; the adynamic cerebral affections; the results of edema or of arterio-sclerosis; various forms of sclerosis of the spinal cord, to which the nervous system is always prone, and which any one of various poisons will help to bring about; subacute forms of multiple neuritis of the ordinary type, such as arise from manifold causes.

A disease may be suspected to be of infectious origin when bacteria are found in the tissues; when the outbreaks occur in epidemics, or are related to season or locality; when it exhibits vascular and histologic changes characteristic of the infection; or specific toxicity of the blood and urine; or if it has become much less frequent since the introduction of antiseptics. The discovery of bacteria is by no means conclusive, as they are often only incidentally present. A disease should be suspected of not standing in a very close relation to infection if it is of a kind developing under other influences, and it is therefore important to study what are the morbid conditions which occur most easily as a consequence of various general strains, and as a result of heredity. The French school has done much in this direction. The arguments are strong in favor of the infectious origin of the different forms of acute (often hemorrhagic) myelo-neuritis or poly-myositis (including *beri-beri*, the epidemic disease of Northern fishermen, Landry's disease, and poliomyelitis). It can at least be said that they are due to some poison acting powerfully for short periods, and in the manner characteristic of bacterial toxins. Bacteria have been found in Landry's disease, but they are not yet accepted as specific. Chorea is probably of infectious origin (Pianese, Dana,

Berkley); bacteria have been found which may or may not be specific. Myelitis (acute focal or transverse) may be produced experimentally by injection of cultures. It also may follow gonorrhea, and may occur in a manner suggestive of other infectious causes. Amputation-neuritis is said to have become less common since the introduction of improved methods of asepsis. There is little to be said for the infectious origin of zoster.

The nervous affections that attend the infective diseases of known character are mainly the following: Acute multiple neuritis may follow almost any one of the infectious processes, but it is difficult to say just what relation it bears to them. The lesions observed have more of the vascular and interstitial character than is ordinarily met with in neuritis of inorganic origin; but they are, doubtless, often due to the products of metabolism. Sometimes, as in diphtheria of rapidly fatal course, no obvious lesions are produced, but modern research is continually widening our resources in this direction. The meningitis which follows the exanthemata is probably due to secondary infection. It cannot, however, be affirmed that the absence of bacteria indicates the absence of a specific local action. In diphtheria and other affections, the virus seems to be almost the equivalent of the organism in its power of exciting local reaction. The meningitis which complicates typhoid fever, pneumonia, perhaps influenza, is generally due to the primary infection, at least in part. Epidemic cerebro-spinal meningitis and sporadic forms are generally due to the diplococcus lanceolatus, the same germ which causes pneumonia; sometimes, also, to other organisms. Recent research has accentuated the importance of purulent and even simple catarrhal affections of the naso-pharynx and the ear as starting-points for meningeal affections. The specific organisms, liable under favorable conditions to cause meningitis, are often present in even the healthy pharynx.

Sometimes the infective agent seems to gain entrance through the intestinal tract.

If we exclude from consideration the cerebro-spinal membranes, which are a great breeding-place for many bacteria, we may say that the instances of local bacterial action upon the nervous system are few, while on the other hand the nervous system is especially prone to suffer from toxic agents circulating in the blood. These poisons are sometimes separable into several definite constituents, which vary as regards their volatility, their solubility in alcohol, their physiologic action. Several of them have a strong tendency to attack the vasomotor system in various ways, and the disturbance of the circulation thus produced is liable to prevent the normal vascular dilatation which is so necessary for the protection of the body against the invasion of pathogenic organisms. These poisons affect the nervous system in various characteristic ways, though it is not improbable that they are capable of acting as universal neurotic poisons. In tetanus the irritability of the spinal cord is heightened, as in strychnin-poisoning; in diphtheria the cardiac centers are sometimes profoundly involved, though gross lesions may be absent; in influenza the tendency of the poison is toward the brain more than in the case of some of the analogous diseases. Besides the psychoses, which are common, acute hemorrhagic encephalitis occurs.

As regards chronic poisoning and its results, we find disseminated sclerosis after various acute infectious diseases, and especially after malaria, but it is not probable that the lesions are due to the action of the specific virus of this antecedent malady.

The causes that contribute to increase the liability of the nervous system to suffer from the effects of infectious disease may be divided into (a) those that increase the liability to invasion of the body by pathogenic organisms; (b) those that lower the resistance of the nervous system.

In the latter class are hereditary weaknesses in special directions, the presence of other poisons in the nervous system, the effects of trauma, a poorly acting vasomotor system.

Debility of the nervous system may contribute to increase the liability of the body to invasion by impairing the vitality of the tissues, which should resist the germs of disease, besides impairing the efficiency of the vasomotor mechanism.

The most important lines of research for the future are in the direction of classifying the special liabilities on the part of the nervous system to disease, independently of infectious causes, the refinement of our methods of histologic research, the more widespread and thorough study of bacteriology, and of the means of determining the toxic condition of the blood and urine.

DR. CHARLES K. MILLS, of Philadelphia, read a paper entitled "Relation of Infectious Processes to Mental Disease," presenting the following conclusions:

Specific infection must be included among the causes of the mental symptoms, or disease which precedes, accompanies, or follows febrile and other infectious disorders.

Much negative evidence can be adduced to show that acute delirium or acute mania is due to toxemia. Such evidence is afforded by autopsies which reveal neither gross nor histologic lesions; in these cases the toxemia probably overwhelms the patient before the production of meningitis or other diseases with recognizable structural lesions.

Analogies with nervous affections that are known or believed to be of microbic origin, such as multiple neuritis, myelitis, and chorea, favor the view that insanities with similar or related phenomena and lesions are also microbic in origin.

The evidence afforded by careful bacteriologic investigation of cases of acute insanity is thus far more meager and shows that various microorganisms may induce the same or similar types of mental disease.

The mental disorders of pregnancy and the puerperal state are in a considerable proportion of cases toxemic, without reference primarily to childbirth, but it cannot be regarded as proved that a bacillus of either eclampsia or puerperal mania is the sole cause of one or the other of these affections.

DR. FRANCIS X. DERCUM, of Philadelphia, read a paper entitled "The Therapeutics of Infectious Processes of the Nervous System." He contended that a consideration of the treatment of infectious nervous processes involves not only the treatment after infection but also its prevention. From much that we know, we have reason to believe that the occurrence of infection is markedly influenced by the nervous system. The ability

to resist infection depends largely upon the maintenance of normal nervous tone. We have also learned that the nerve-cells undergo certain changes in the course of their functional activity, and these changes can only be interpreted as those of fatigue. The first problem is the prevention of undue waste of nervous substance from undue or excessive fatigue. The necessity for proper proportion of sleep and exercise and suitable food must be borne in mind as an important element in prophylaxis. The question arises:

Are there any means of special prophylaxis against this or that infectious disease? Here the answer is uncertain. The preventive inoculations of Pasteur, Behring, Tizzoni and Cattani suggest themselves, but at the same time doubts as to the advisability and the applicability of the methods arise.

Again, is there anything that can be done in the various infectious fevers, in general pyemia, to prevent nervous infection? When the nervous system is threatened by the existence in other structures of foci of infection, the indication to remove these sources of infection is clear.

In regard to treatment the general indication is to arrest or limit the infectious process and to bring about elimination of the morbid products. To meet the first indication is not as yet possible; but the field of chemistry, and of the biologic laboratory, may in the future yield great discoveries.

The attempt to combat infectious microbes by means of the toxins which they produce was then considered; but with the possible exception of tuberculosis and lepra, the symptoms produced by infectious microorganisms appear to be due not so much to the germ as to these very toxins.

With regard to tuberculosis of the nervous system, the use of the lymph of Koch has been shown to be not only useless but dangerous.

In the treatment of leprosy by the use of lymph, the failure appears to have been almost equally marked.

With regard to hydrophobia, the literature was reviewed at length, and the conclusion reached that it is vain to deny the truth of Pasteur's experimental researches on animals, while the evidence as regards human beings in specific instances is strong and convincing.

In reference to tetanus the condition is still more interesting. A full review of the literature of the subject was given, including the collected reports of thirty-four cases treated either by the powder of Tizzoni or by serum. Of these, twenty cases were successful; but in some of these cases other measures, such as amputation or early active treatment of the wound, were employed. There is no contra-indication to the employment of these antitoxins, as they appear to be in no way injurious.

The other means at our disposal for combating the infectious nervous processes resolve themselves into general remedies, drugs and surgical procedures. Cold has been applied with varying success. It is not improbable that baths of suitable temperature might prove of service in the treatment of infectious nervous diseases. Whether or not by this means the elimination of toxins would be favored is a matter that at present can only be conjectured.

With regard to drugs we meet little that is encouraging or gratifying. In leprosy especially much has been

claimed for gurjun, oil of chaulmoogra. In chorea, which is probably infectious, Dr. H. C. Wood has proposed quinin as of considerable value. Antipyrin also has its advocates.

Surgical procedures enable us occasionally to accomplish definite and often brilliant results. This is especially true with regard to the evacuation of pus in positions formerly considered inaccessible, as in brain-abscess.

In conclusion a suggestion was offered in regard to the treatment of tetanus which it was thought might prove of value. It has been observed that the bacillus of tetanus while growing in thymus-infusion did not develop spores, and that animals injected with such cultures were highly immune to the cultures of tetanus-bacilli grown in other media. If thymus-juice possesses such remarkable properties, it should be tested with a view to its possible therapeutic effect. Its administration in a case of tetanus beneath the skin could certainly do no harm, and might do good, and it might also be administered by the mouth. If successful it would prove far more valuable than the antitoxin, because so readily procured.

This completed the scientific work of the Congress.

The President, Dr. Alfred L. Loomis, in adjourning the Congress, congratulated the members on the fact that the registration had been larger at this than at any other of the previous meetings. The attendance at the sessions of the various constituent Associations had also been larger, and the work of a high degree of merit. There had been a united feeling and action among the different Societies in support of the Congress, and the different Associations had become more closely united than ever before. He considered the Congress to be one of the most important medical bodies in this country, as it brings together skilled workers in all the departments of medicine and surgery, and encourages unity of thought and action among medical men. If there is one body more than another in this country that is to raise our profession from the position which it has occupied so long, it is such a body as the Congress.

AMERICAN SURGICAL ASSOCIATION.

Fifteenth Annual Meeting, held at Washington, D. C., May 29, 30, and 31, and June 1, 1894.

(Continued from p. 617.)

THIRD DAY—MAY 31ST.

At the Executive Session the following officers were elected:

President, Dr. F. S. Dennis, of New York. *Vice-Presidents*, Dr. J. R. Weist, of Richmond, Ind.; Dr. J. B. Roberts, of Philadelphia. *Secretary*, Dr. M. H. Richardson, of Boston. *Treasurer*, Dr. N. P. Dandridge, of Cincinnati. *Recorder*, Dr. De Forest Willard, of Philadelphia. *Member of Council*, Dr. T. F. Prewitt, of St. Louis.

The next meeting is to be held in New York City. Dr. Dudley P. Allen, of Cleveland, Ohio, was elected to membership.

The following were elected to Honorary Membership: Sir Spencer Wells, F.R.C.S., London, Eng.; Dr. William Macewen, Glasgow, Scotland; Dr. M. H. E. W. Schede, Hamburg, Germany; Prof. Ernst v. Bergmann, Berlin, Germany; Prof. Karl Thiersch, Leipzig, Germany;

Prof. Theodor Kocher, Berne, Switzerland; Prof. Jules E. Péan, Paris, France.

The discussion of the papers on "Renal and Ureteral Surgery," read on the preceding day, was now taken up.

DR. M. H. RICHARDSON, of Boston, emphasized the importance of examination of the urine prior to all operations. In regard to the method of performing nephrectomy, he dwelt upon the abdominal method, the incision being made in front laterally. This enables the operator to control bleeding, which is the chief source of danger in the operation. By this method the surgeon is able to determine the presence or absence of the other kidney. Dr. Richardson expressed the belief that by this method the mortality of nephrectomy would be greatly reduced, by so providing for hemorrhage that it could not be an element in the mortality.

DR. H. H. MUDD, of St. Louis, agreed with Dr. Tiffany that in traumatic lesions of the kidney, even gunshot and stab wounds, it is not always necessary to do nephrectomy. He had seen such cases recover. He had also met with a number of cases of extensive laceration of the kidney from contusion, in which there was no external evidence of such injury. In many of these cases recovery takes place without operation. When operation was needed, Dr. Mudd believed that partial nephrectomy was justifiable. If necessary, a secondary operation can be done. The removal at a primary operation of kidneys so injured is likely to be disastrous. In pyelo-nephritis and renal lithotomy the first operation should be tentative, consisting of incision and evacuation, the kidney being allowed to remain; a secondary operation being performed if necessary.

Dr. Mudd did not favor the abdominal incision for the removal of the kidney, on account of the risk of infecting the abdominal cavity in suppurative conditions of the kidney, and because the lumbar incision is usually sufficient and, if necessary, it can be extended and the abdomen opened.

DR. T. F. PREWITT, of St. Louis, related several cases of renal stone, laceration, etc., coming under his observation. One of these was in a man who had passed scales of stone by the urethra and in whom operation showed a stone in the pelvis of the kidney, with several small detached particles. Dr. Prewitt was unable to offer an explanation of this separation. With regard to diagnosis, he held that a large amount of pus with a small amount of mucus in the urine indicated that the trouble was in the kidney rather than in the bladder.

DR. W. S. FORBES, of Philadelphia, called attention to the tolerance of the kidney to the presence of stone. He related a case in which the autopsy revealed the presence of a stone in the pelvis of the kidney, and in which, during life, there were no indications of stone. The character of the stone was peculiar in that it was what is known as an indigo stone.

DR. CHARLES B. NANCREDE, of Ann Arbor, said that he had used the abdominal method of nephrectomy in four cases, but he did not favor it in suppurative conditions of the kidney. In order to avoid hemorrhage he had used an elastic ligature, gradually slipping it down and removing the kidney piecemeal until the pedicle is reached. In the treatment of the suppression of urine that may follow these operations, he recommended the use of nitroglycerin, which he had used with advantage.

DR. JOHN B. DEEVER, of Philadelphia, added his testimony in favor of the anterior incision in nephrectomy. He felt certain that with proper precautions the danger of infection of the peritoneal cavity could be avoided.

DR. STEPHEN H. WEEKS, of Portland, Me., reported the case of a man who developed an abscess in the groin after having had symptoms of renal colic some months before. On opening this abscess pus was discharged, and subsequently a small calculus was passed. No urine was discharged through the abscess at any time. The sinus has since almost healed.

DR. WILLIAM H. CARMALT, of New Haven, Conn., reported the case of a woman in which it was thought that nephrectomy might be required. On preliminary examination through an abdominal incision only one kidney could be discovered. The patient died three years later, and the autopsy showed that the second kidney was located in the pelvis.

DR. WILLIAM B. COLEY, of New York, read a paper entitled "The Treatment of Malignant Disease with the Toxins of Erysipelas." He related that in a previous paper he had reported ten cases treated by the injection of living cultures of erysipelas. The first case was one of inoperable, recurrent sarcoma of the tonsil. The injections were continued for some time without causing an attack of erysipelas, but finally a culture from a virulent case was used and reproduced the disease. The tumor ceased to enlarge, the general condition improved, and the patient is still living, three years after the beginning of the treatment.

Six of the ten cases presented sarcoma and four carcinoma. In only four was erysipelas produced. Those cases in which the disease was not induced seemed to be as much benefited as those in which it was, and this led to a trial of the toxic products instead of the living cultures. A combination of the toxin of the bacillus prodigiosus with that of the streptococcus of erysipelas was also employed and found to be more satisfactory than that of the latter alone. Since December, 1892, Dr. Coley has treated thirty-five cases of inoperable malignant disease by the injection of the toxins of these two organisms. Twenty-five were cases of sarcoma, seven of carcinoma, and three either sarcoma or carcinoma. Among the cases reported were the following: A case of sarcoma of the abdomen and pelvis, followed by recovery; a case of recurrent sarcoma of the back and groin, with entire disappearance of the tumor, and no recurrence fourteen months after cessation of the treatment; sarcoma of the iliac fossa, with partial disappearance of the tumor—the health of the patient being perfect; inoperable sarcoma of the abdominal wall, with entire disappearance under treatment; sarcoma of the leg recurring after amputation, with enlargement of the glands of the groin, with marked improvement, but still under treatment; enormous round-celled sarcoma of the neck and thyroid, with marked improvement; large, pulsating round-celled sarcoma of the ileum and buttock, with marked diminution in size.

In the eight cases of carcinoma treated there has been marked improvement in two, slight improvement in four, and no effect in two. In no case has the tumor disappeared.

Of the total number of cases treated there is reason to hope for a permanent cure in five. Nine cases showed

marked improvement, eight showed only slight and temporary improvement, while in two there was no apparent effect. One of these latter cases was an osteosarcoma of the sternum, in which only four injections had been given; the other was a sarcoma recurring after removal, and in which, owing to the condition of the patient, only small doses could be employed. The spindle-celled and mixed-celled sarcomata seemed to be the most susceptible to the action of the toxins, and periosteal sarcomata and osteo-sarcomata less susceptible.

An important element in the success is the character of the culture employed. Cultures from any but virulent cases have had but little effect. With regard to the manner in which the treatment acts, Dr. Coley was inclined to base the explanation on an acceptance of the micro-parasitic origin of malignant disease. It is only in this way that the effect of this mode of treatment can be explained.

The following conclusions were presented: 1. The curative action of erysipelas upon malignant tumors is an established fact. 2. This action is much more powerful in sarcoma than in carcinoma. 3. It is chiefly due to the toxin of the streptococcus of erysipelas, which may be isolated and used with safety. 4. It is greatly increased by the addition of the toxin of the bacillus prodigiosus. 5. To be of value the toxin should be obtained from virulent cultures and should be freshly prepared. 6. The results obtained from the use of toxins, without danger, are so nearly, if not quite, identical with those obtained from an attack of erysipelas that inoculation should never be resorted to.

DR. LEWIS S. PILCHER, of Brooklyn, read a paper entitled "Venous Tumor of the Diploë." The case reported differed from others which had been described in that the tumor did not communicate with the longitudinal sinus, but was essentially a large venous cavern into which numerous diploic veins opened. The patient was a girl, fifteen years old, who at the age of five years fell and struck the top of her head. Within a few days a small, soft swelling was noticed at the site of injury, without pain or tenderness, but gradually increasing in size. At the end of five years the swelling was incised and a small quantity of clotted blood evacuated, but the sac immediately refilled. It was repeatedly opened, with the same result. When the girl came under observation she presented a prominent tumor over the site of the anterior fontanel, about two and a half inches in its largest diameter. Over the convexity of this mass the skin was thin and without hair. In the right anterior quadrant of the base an elevated plate of bone could be felt. The tumor was soft and could be diminished very slightly in size. It was gradually enlarging. An operation for the relief of this condition was undertaken. It was found that in the anterior part of the base of the swelling the cranial bone was wanting and over a space of $2\frac{1}{2}$ by $1\frac{1}{2}$ cm. the dura mater was exposed. Certain venous channels of the diploë were seen to be opened and from these free bleeding took place. The overhanging edge of bone was cut away with bone-forceps, the base of the cavity was well curetted, and the cavity was packed with iodoform-gauze, and as far as possible the wound was sutured. The after-course of the case was uncomplicated.

DR. J. W. ELLIOTT, of Boston, read a paper entitled

"Strangulation of Meckel's Diverticulum caused by Volvulus of the Ileum." He detailed the case of a man, thirty years old, who came under observation after having been sick for four days with vomiting, chills, and abdominal pain. The bowels had moved twice in the preceding forty-eight hours. The temperature was 103.6° , the pulse 160, the respiration 35. Under ether, a large, hard mass was felt in the middle of the abdomen. The case was regarded as one of appendicitis.

The abdomen was opened by a vertical incision two inches inside of the anterior superior iliac spine. A quantity of turbid fluid escaped. The appendix was found to be normal. The incision was extended, and the mass exposed. It sprang from the lower part of the convex surface of the ileum, and was tightly twisted at its point of attachment. Separating the adhesions, it was found to be attached to the under surface of the umbilicus, and it was then evident that it was Meckel's diverticulum in a strangulated and gangrenous condition. It was seven inches long and about the size of the ileum. The diverticulum was removed and the opening in the ileum closed. The ileum in this position was found twisted on itself, but the gut was not completely obstructed. This twist was evidently due to old adhesions extending into the mesentery. The patient, already septic at the time of operation, died of septic peritonitis on the second day.

Meckel's diverticulum is due to the persistence or incomplete obliteration of the vitelline duct. It is usually small, and has its principal interest in the fact that it not infrequently acts as a band, and causes intestinal obstruction. It may be the seat of retention-cysts, which may or may not communicate with the intestine. A cyst of this kind has been reported, of which the pedicle had become strangulated, causing gangrene of the mucous membrane, and setting up acute peritonitis. These two cases establish the fact that strangulation of Meckel's diverticulum is one of the causes of acute peritonitis. The diverticulum resembles the vermiform appendix, and the lesions of the two may easily be confounded clinically. A case of peritonitis following perforation of the diverticulum has been reported.

The symptoms of inflammation of the appendix and those of inflammation of Meckel's diverticulum are the same. In differential diagnosis the history of a discharge from the umbilicus would suggest the presence of a diverticulum, while a history of previous attacks of pain would be significant of either an inflamed appendix or an inflamed diverticulum. The presence of a tumor, or tenderness near the umbilicus, should favor the theory of an inflamed diverticulum. In the case here reported, the tumor was below and slightly to the right of the umbilicus.

The only treatment in such a case is prompt celiotomy, the pedicle being carefully stitched, as it often opens directly into the intestinal canal. The vessels should be carefully ligated, because the diverticulum is supplied by a branch of the mesenteric artery.

FOURTH DAY—JUNE 1ST.

DR. J. MCFADDEN GASTON, of Atlanta, read a paper on "Mooted Points as to Fractures of the Arm, with Notice of an Improved Splint," which is to appear in a future number of THE NEWS.

DR. W. S. FORBES, of Philadelphia, presented a communication entitled "The Removal of Stone in the Bladder; with the Presentation of a New Lithotrite." This also is to appear in a future number of THE NEWS.

DR. WILLIAM H. CARMALT, of New Haven, Conn., read a paper on "Extirpation of the Larynx." He reported a case in which extirpation of the larynx was done in such a way as to permanently close the opening into the mouth, so that there should be no communication with the lungs.

A man, forty-four years old, came under observation with severe attacks of dyspnea due to the presence of an ulcerated nodule in the larynx, which had been first discovered two years before. The dyspnea necessitated the performance of tracheotomy. The larynx was extirpated, the upper portion of the esophagus being stitched to the epiglottis. The man was able to swallow fluids on the second day, and made an uneventful recovery. He is now able to speak in a whispered voice.

DR. JARVIS S. WIGHT, of Brooklyn, exhibited a number of instruments, including needle-forceps, self-threading needle, aneurism needle-forceps, and a new form of knife provided with a beak substituting the use of a grooved director.

The following papers were read by title: "The Effect of Erysipelatous Attacks on Tuberculosis," by DR. DE FOREST WILLARD, of Philadelphia; "Hernia," by DR. W. T. BULL, of New York; "Cases of Extra-uterine Pregnancy, with Remarks," by DR. M. H. RICHARDSON, of Boston; "Treatment of Urethral Vegetations by a Circular-cutting Curet," by DR. JOHN B. DEEVER, of Philadelphia; "Report of Surgical Cases," by DR. CHARLES B. PORTER, of Boston.

ASSOCIATION OF AMERICAN PHYSICIANS.

*Ninth Annual Meeting, held at Washington, D. C.,
May 29, 30, 31, and June 1, 1894.*

(Continued from page 619.)

THIRD DAY—MAY 31ST.

DR. J. P. CROZER GRIFFITH, of Philadelphia, presented a paper on "Tetany in America." This disease, although common enough in Europe, is rare in this country. Several varieties of the disease have been described, as the chronic, the rheumatic, etc., but there are no well-defined lines of demarcation between these forms. The disease is characterized by tonic spasms, either continuous or paroxysmal, and usually symmetric, not accompanied by unconsciousness, and not dependent upon lesions of the cord or of the nerves, nor upon hysteria. Dr. Griffith reported a series of cases occurring in his own practice. Although cases have been recognized, the disease is exceedingly rare, at least in this country. Carpo-pedal spasm is a mild form of tetany. Dr. Griffith has been able to collect from the literature 72 cases of the disease. The occurrence of carpo-pedal spasm in association with laryngismus stridulus is very infrequent. Of the 72 cases collected, 34 were at the age of puberty, or older; 13 between puberty and two years of age; 25 under two years of age, and 20 of these less than one year of age. Pain in the affected parts, apparently due to the spasm, was present in 21 cases only. There were 17 cases of laryngismus stridulus. The

chief remedies for the condition are the nerve-sedatives. But few cases have proved fatal, and death, when it occurred, was due to complications.

DR. W. GILMAN THOMPSON, of New York, reported a case of tetany occurring in a man thirty-five years old.

DR. STOCKTON, of Buffalo, reported a case with a somewhat obscure etiology, occurring in a child four years of age. The child presented carpo-pedal spasm, with some suppression of urine, which at the time was thought to be probably due to fibro-cystic degeneration of the kidney. The child made a good recovery, although still delicate. The kidney-disturbance was probably functional.

DR. ABRAHAM JACOBI, of New York, regarded laryngismus stridulus as of a quite frequent occurrence, and thought that the paucity of reports is due to the great frequency rather than to the great rarity of the disease. He regarded rachitis as probably the cause of the disorder.

DR. WILLIAM OSLER, of Baltimore, reported the case of a woman in which the disease recurred during six successive pregnancies.

DR. WHARTON SINKLER, of Philadelphia, read a paper on "Lead-palsy in Children." He stated that this condition is rare in young children, for the reason that they possess more active powers of elimination. The symptoms are both motor and sensory. The paroxysm in a child is as likely to affect the lower extremities as the upper. He reported eight cases gathered from the literature, and three cases occurring in his own practice. The pathology of lead-poisoning in children is generally thought to consist in alterations in the nerves. It is probable, however, that in many cases the symptoms are due to the direct action of the poison upon the muscles; in the chronic cases they may result from alterations in the horns of the cord.

DR. C. P. PUTNAM, of Boston, agreed with Dr. Sinkler in the statement that the legs are affected in children as well as the arms. He thought that the more marked involvement of the arms in adults is due to the greater use of those parts; in children the legs are used largely, and hence, probably, the greater frequency of leg-palsy in them.

DR. ABRAHAM JACOBI, of New York, has had two cases, in each of which the legs were involved as well as the arms.

DR. CHARLES L. DANA, of New York, read a paper entitled "A Study of the Temperature in Cerebral Apoplexy." Within the term apoplexy he included all cases of intra-cranial hemorrhage and all cases of softening due to embolism and thrombosis. As to the direct effect of an apoplexy upon the general bodily temperature there is on the first day a rise of from 1° to 2°, as shown by the rectum. In acute softening from embolism or thrombosis there is rarely any disturbance of temperature on the first day. Hence any elevation of temperature occurring on the first or second day of an apoplexy indicates cerebral hemorrhage. The fever is slight, the temperature reaching from 101° to 103°. In those cases in which there is a terminal rise to 106° or 107° a pneumonia, perhaps a gangrenous pneumonia, is probably the cause. Unilateral disturbances of temperature after an apoplectic stroke have been noted. In seven cases of acute cerebral softening and in three of cerebral

hemorrhage, in all of which autopsies were made, it was found that in the grave massive hemorrhages the affected side showed a higher temperature than the well side; in the cases of acute softening there was no difference of temperature noted. The sudden tearing of the brain by the hemorrhage causes more disturbance than the gradual process of softening. A preliminary fall of temperature in apoplexy is exceedingly rare. This may be explained by the fact that most of the cases are seen some hours after the event has occurred. The effect of the special localization of the clots or the softened areas upon the temperature-changes is interesting; and this brings up the question of the position of the thermic centers. Authorities differ in their belief as to the exact location of these thermic centers. The studies and researches of physiologists lead to the conclusion that injuries of the corpus striatum and pons cause a rise of temperature, while injuries of the cerebellum and white matter of the cerebrum do not cause such an elevation. Dr. Dana, however, doubted the accuracy of these results. He called attention to the fact that after linear craniectomy the temperature frequently shoots up to a high point, and this elevation is due probably to cortical injury. Also cases of injury of the corpus striatum have been followed by no rise of temperature. He believed that it cannot definitely be stated that the thermic centers are present in the brain, but it can be said that the temperature is likely to rise after lesions of the pons and after tearing wounds of the cortex of the brain. He urged the great value of further studies of temperature-changes following apoplectic seizures.

DR. JOHN H. MUSSER, of Philadelphia, read a paper on "The Mild Character and Diminished Prevalence of Syphilis and the Infrequency of Visceral Syphilis." He spoke of the difficulty of securing accurate statistics on such a subject. The most reliable sources of such statistics are the Army and Navy records of a large hospital. He believed that there is less syphilis in his own community at present than there was ten years ago. The cause of the diminished prevalence can only be a matter of speculation. The increase in the habits of cleanliness and the improvement in the methods of treatment of the infectious period of the disease are probably factors. The decline in the tertiary manifestations, while small, is still to be noted. Visceral syphilis is quite infrequent now as compared with the past.

DR. JANEWAY, of New York, thought it would be a mistake to overlook syphilis as a preëminent factor in the production of disease. He finds it a frequent etiologic factor in the production of locomotor ataxia and in general paresis. It is also a strong etiologic factor in the development of aneurism.

DR. H. M. LYMAN, of Chicago, said that the tendency of syphilis is toward a diminution in the virulence of the primary and secondary manifestations rather than of the tertiary manifestations. A proof of the tendency of the disease to die out is shown by the history of the Pacific Islanders. A century ago, when first discovered, they were entirely free from syphilis, and yet they were undoubtedly direct descendants of the Asiatics, among whom the disease has ever been prevalent.

DR. FREDERICK C. SHATTUCK, of Boston, read a paper entitled "The Frequency of Renal Disease as Shown by Albumin and Casts, especially in those past

Middle Life." He stated that the chemic preceded the microscopic examination of the urine. The presence of casts in the urine always shows an involvement of the renal tissue. He did not propose to enter into the question as to whether or not albuminuria is physiologic, as would seem to be indicated by its great frequency. He considered the heat-test the most delicate of all tests for albumin. He has for a number of years been in the habit of examining the urine of patients, no matter what the disease for which they came. Excluding all cases of fever and those in which bile and sugar are present, or in which there is sufficient blood or pus to account for the albumin, as well as all cases of unquestionable nephritis, Dr. Shattuck stated that as a result of his studies he is not disturbed by the presence of albumin and casts in the urine of patients under fifty years of age as much as he was formerly. He was inclined to believe that renal albuminuria, while undoubtedly pathologic, is not of any more significance than a chronic pharyngitis. The frequency of albuminuria increases with advancing age.

DR. T. M. PRUDDEN, of New York, read a paper on "Experimental Phthisis in the Rabbit with Formation of Cavities." He stated that he believed that secondary infection of the lung by the streptococcus pyogenes after primary infection by the tubercle-bacillus has a decided effect in the production of the symptoms of pulmonary tuberculosis. He introduced into the lungs of rabbits already affected with tuberculosis cultures of the streptococcus pyogenes, and in a large number of such cases of mixed infection cavities formed in the lungs. While not wishing to draw any practical conclusions from his investigations, he laid stress upon the fact that it is possible to produce artificially, in the way indicated, cavities in the lungs of tuberculous animals.

In the absence of DR. E. L. TRUDEAU, of Saranac Lake, his paper, entitled "A Report of the Ultimate Results Observed on Experimental Eye-tuberculosis by Tuberculin-treatment and Preventive Inoculation," was read by Dr. Loomis, of New York. It was pointed out that the tendency to relapse in the eye-condition after treatment with tuberculin is much less than before such treatment. The action of the injection of tuberculin is believed to be the same in effect as that of celiotomy upon tuberculous peritonitis. After the operation such reactive inflammation is set up as to overcome the original tuberculous inflammation. A relative degree of immunity may be secured in this way. The tuberculous process produced in the eye of an animal previously subjected to this protective treatment runs a course different from that produced in animals not so immunized, and may go on to an absolute cure.

"Cough Induced by Posture as a Symptom Nearly Diagnostic of Phthisis" was the title of a paper read by DR. NORMAN BRIDGE. He dwelt on the fact that in pulmonary tuberculosis change in posture has a decided effect in increasing or decreasing the tendency to cough. Some patients may rest in comfort on one side and suffer greatly when lying upon the other side. As soon as the whole lung of one side is involved, resting on that side is attended with comfort. It was thought probable that a study of this subject may be of service in diagnosing the situation and extent of a pulmonary tuberculosis.

FOURTH DAY—JUNE 1ST.

DR. VICTOR C. VAUGHAN, of Ann Arbor, presented a paper entitled "The Chemical Products of the Anaërobic Putrefaction of Pancreatic and Hepatic Tissues, and their Effects upon the Tests for Morphin." He stated that the products of putrefaction vary as the process takes place under aerobic or anaërobic conditions. Owing to lack of caution in this regard, the tests of Dragendorff are probably more or less inaccurate. Indol and skatol may yield the same chemic reactions as morphin, and responding thus to the same tests may give rise to errors in the conclusions in toxicologic investigations. Indol and skatol, and their derivatives, must, therefore, be excluded in all such investigations.

DR. H. M. LYMAN, of Chicago, read a paper on "Gastro-enteric Rheumatism." He said that rheumatic dyspepsia is just as much a nervous manifestation of gastric disease as rheumatic tonsillitis is a neurotic manifestation in the throat. Both are localizations of the rheumatic diathesis. Gastro-enteric rheumatism is a disease of advanced life. At times obesity, diabetes, and polyuria are associated with it. Some of the patients have had rheumatism in early life. It is a rheumatic affection of the nerves of the alimentary canal. The patients suffer some hours after meals, or when the stomach is empty. The pain is referred to the epigastrium or hypochondrium. At times pain is felt in the cardiac region. The character of the pain is very peculiar. It may be accompanied with tenderness in the epigastrium when pressure is exerted. Its intensity is not usually very great, though at times it may become so. It is a dull, persistent, widely-distributed distress. It is readily distinguished by the sufferer from pains having their origin in the abdominal walls. The disease shows a marked tendency to alternations with neuralgias elsewhere over the body; thus facial or brachial neuralgia and insomnia may be accompaniments. At times the pelvic nerves are affected, and the patient then suffers from rectal or vesical tenesmus. Nocturnal erections may occur. The attacks are more marked and more frequent during the wet seasons of the year. In the intervals between the paroxysms there may be perfect bodily comfort. At first the general health is not affected, but in course of time exhaustion and neurasthenia supervene, together with anemia, cachexia, and hypochondriasis. The disease must be distinguished from abdominal gout, peritonitis, abdominal rheumatism, chronic catarrhal gastritis, chronic hepatitis, chronic pancreatitis, carcinoma of the stomach and liver, ulcer of the stomach, and other abdominal conditions. The pathology of the disease is as unsatisfactory as that of rheumatism in general. It is probably to be found in a toxemia resulting from retarded oxidation accompanying certain conditions. Free perspiration will afford great relief, thus going to prove the existence of a toxic condition. In rheumatic gastritis the gastric juice contains a great excess of free hydrochloric acid, in contradistinction to the condition noted in gastric carcinoma. This is analogous to the presence in the muscles of free sarcolactic acid during an attack of ordinary muscular rheumatism. The treatment of rheumatic gastritis does not differ in any respect from that of other varieties of neuro-rheumatism. If the distress follows three or four hours after meals,

a crust of bread, or a glass of water or milk, may arrest the painful sensation. The danger, however, is that dilatation of the stomach may result from such a course. Sodium salicylate, ten grains every three hours, is valuable in alleviating the condition. Salol also is of great benefit in the treatment. Chief among the remedies is olive-oil, which not only relieves the pain, but also controls the constipation that usually coëxists. Alteratives, such as mercury in small doses, potassium iodid, and tonics, are of service. Occasional mercurial purges should not be neglected, and occasional flushing of the bowels is very valuable. The diet must be regulated, and should be entirely vegetable if the patient is of plethoric habit. Mineral waters are of service. This regimen must, however, not be adhered to too rigidly. In elderly people slight alcoholic stimulation may be of service. Frequent warm baths are exceedingly grateful, especially when associated with massage. Mental and physical fatigue must be avoided.

DR. JOHN H. MUSSER, of Philadelphia, decried the multiplication of terms. He regarded this condition as a gastro-enteric form of lithemia, and this term, as indicating the general nature of the disease, should be employed in preference to gastro-enteric rheumatism.

DR. VICTOR C. VAUGHAN, of Ann Arbor, thought that there should be a discrimination made between pains due to the presence of an excess of uric acid and those due to other conditions. He would call the pain due to uric acid gouty. Gouty cases are to be recognized by an examination of the blood, with a determination of the number of polynuclear colorless cells present.

DR. DANA would restrict the term rheumatism to that particular class of cases in which there are articular manifestations, with a tendency to cardiac and pericardial complications, and would give new names to all of the other conditions resulting from the rheumatic diathesis.

DR. GEORGE DOCK, of Ann Arbor, reported a "Case of Osteomalacia." The disease occurred in a Pennsylvania woman, twenty-four years old, whose father probably had had syphilis, and her mother a large goiter, but otherwise was well. The patient married at seventeen, and gave birth to her first child two years later. Throughout the pregnancy she suffered from rheumatic pains. In the labor the placenta was adherent, and grave hemorrhage took place. Two years later a second child was born, and again the placenta was adherent and the hemorrhage alarming. The woman nursed both children. The second pregnancy was followed by a return of the rheumatic pains, and shortly after this softening of the bones began to be noticed. She had a fall some time later, fracturing her left thigh. There was a steady advance in the progress of the disease up to the time of her death, which resulted from some acute bronchial affection. Sexual desire was absolutely abolished, in contradistinction to the usual history of these cases. The urine never contained the slightest trace of lactic acid. Toward the close of life renal colic developed, and calculi and gravel were passed. The treatment consisted in the administration of a concentrated syrup of lime until the colic was increased. Phosphorus did no good at all on account of the gastric disturbance that it occasioned. The severe pain was controlled by the use of codein. At one time the patient was placed upon chloral, forty-five grains per diem, for one month, but

without any effect. After death all of the bones were found to be softened, with the exception of those of the head. The ribs could be cut through with a knife, as could also the bones of the pelvis. The superior outlet of the pelvis was of normal shape. The femora were composed of bony spicules imbedded in various kinds of bone-marrow. They also contained cysts at various points. The chief remedies in the disease are phosphorus in large doses, and castration. In this case castration was proposed, but declined.

The following papers were read by title: "A Case of Mitral Stenosis, with Great Hypertrophy of the Right Ventricle; Death from Hemoptysis," by Dr. A. McPhedran, of Toronto, and "A Case of Calculous Pyelitis, with Invasion by the Bacillus Lactis Aërogenes," by Dr. John H. Musser, of Philadelphia.

AMERICAN MEDICAL ASSOCIATION.

Forty-fifth Annual Meeting, held at San Francisco, Cal., June 5, 6, 7, and 8, 1894.

(By Telegraph.)

GENERAL SESSION.

FIRST DAY—JUNE 5TH.

The Forty-fifth Annual Meeting was called to order by President James F. Hibberd, of Richmond, Ind. There were present, besides, on the platform Dr. I. N. Love, of St. Louis, Second Vice-president; Dr. Wm. B. Atkinson, of Philadelphia, Permanent Secretary; Dr. H. B. Ellis, of Los Angeles, Assistant Secretary; Dr. J. L. Simmons, President of the California State Society; Dr. R. H. Plummer, Chairman of the Committee of Arrangements.

Prayer was offered by Rev. DR. ROBERT MCKENZIE.

In the absence of Governor Markham and Mayor Ellert, who were unavoidably detained, Supervisor J. G. JAMES extended a hearty welcome to the Association, with the freedom of the city.

DR. J. L. SIMMONS, of Sacramento, in behalf of the California Medical Society, also delivered an address of welcome.

DR. H. R. PLUMMER, Chairman of the Committee of Arrangements, announced instructions and information to delegates and visitors. He also presented to President Hibberd a gavel, whose handle was made of orange-wood, representing the State color, yellow, and the body of manzanita wood, which is peculiar to the Pacific slope; its sides were of gold, one inscribed A. M. A., S. F., 1894, and the other James F. Hibberd, President.

The physicians of Oregon, through the courtesy of Dr. W. G. Owens, sent one dozen gavels to be used in the various sections; the handles were of yew-wood, the body of myrtle. President James F. Hibberd prefaced an address (which will be found at p. 625 of this issue of THE NEWS) with the following remarks: "Some of the pleasantest surprises of my life are occurring at the close of my career. The sentiment which has prompted the gift of this gavel is more appreciated than the gift itself. I shall endeavor to use it discreetly and properly." On motion of DR. W. T. BISHOP, the address was referred to a committee of five for consideration. The committee was constituted by the appointment of I. N. Love, Acting President; Dr. W. T. Bishop, of Pennsylvania; Dr. Lyman Beecher Todd, of Ken-

tucky; Dr. R. Beverly Cole, of San Francisco; Dr. Fred. W. Mann, of Michigan; Dr. J. P. Woodbridge, of Michigan.

DR. N. QUIMBY moved that a committee of five be appointed to especially consider the danger of reduction of the number of army surgeons. The committee was constituted of Dr. I. N. Quimby, of New Jersey; Dr. J. Copeland, of Alabama; Dr. J. B. Hamilton, of Illinois; Dr. E. E. Montgomery, of Pennsylvania; Dr. J. M. Duff, of Pittsburg.

On motion, Dr. Ed. C. Ingalls, of Chicago, was elected a member of the Association.

On motion, the delegates from the Pharmaceutical Association were also invited to take seats in the Convention.

Owing to the illness of the Treasurer, DR. R. J. DUNGLISON, the Treasurer's report was read by the Permanent Secretary.

DR. INGALLS presented the Treasurer's report in detail. It was indorsed by Dr. E. E. Montgomery and Dr. E. Fletcher Ingalls.

On motion of DR. HUME the report was received and filed.

The Secretary presented a report regarding the action of the various State Societies as to the revision of the Code. Twenty-one societies are opposed to the change. Nebraska, Vermont and Indiana are in favor of the change. Wisconsin and Florida laid the matter on the table. Three had not yet considered the question, and from eleven no reply had been received.

A brief recess was held, after which the election of the Nominating Committee was proceeded with.

The following resolution was offered by DR. L. D. BULKLEY:

WHEREAS, Each section should have three members on the Business Committee of the Association; and

WHEREAS a considerable number have signified their inability to be present this year;

Resolved, That the officers of the various sections be hereby instructed to appoint from the members in attendance alternates to act at this meeting for those who are unable to be present.

DR. R. J. DUNGLISON tendered his resignation as Treasurer.

The following resolution was offered:

WHEREAS, Dr. R. J. Dunglison has been for seventeen years a faithful, energetic Treasurer of this Association, without any compensation; therefore, be it

Resolved, That the hearty and unreserved thanks of this Association be cordially extended to him for his efficient and laborious duties on behalf of this Association, and a copy of this resolution be forwarded by the Secretary to Dr. Dunglison.

An amendment was offered by DR. MONTGOMERY to present to Dr. Dunglison \$300 in appreciation of his services.

SECOND DAY—JUNE 6TH.

The Association was called to order by President Hibberd at noon.

The report of the Committee of Arrangements was presented.

The following resolution was offered by DR. QUIMBY, of New Jersey, and was adopted:

Resolved, That the American Medical Association urge upon Congress the advisability of preserving and promoting the efficiency of the Army Medical Department.

Resolved, That any reduction in the present membership of the Army Medical Department or of its appropriation would be prejudicial to the interests of the army and of the country; and be it further

Resolved, That the Secretary be instructed to thus inform Congress by telegraph.

The Address on Medicine was delivered by DR. C. H. HUGHES, of St. Louis, who chose for his subject "The Nervous System in Disease and the Practice of Medicine from a Neurological Standpoint." He said that in this age of preëminent progress in every department of human research the medical profession is to be congratulated on the onward march Medicine has made and is yet making toward the mitigation of human misery and the mastery of disease. As Hippocrates drove the devotees of superstition from the Temple of Hygeia, and taught the people that offended gods could neither bring, nor propitiated gods dispel, disease, and as Andreas Vesalius defied the popular prejudice and ecclesiastic power of his day, at the risk of his life, to make his first human dissection, so his professional descendants of to-day continue breaking down barriers of ignorance, of prejudice and superstition in the way of man's happiness and prosperity, unlocking the secrets of Nature's arcanum and setting the captive mind and organism free from the enthrallment of disease. Substitutive inoculations, for establishing tolerance and immunity to other diseases, are spreading the rescuing power of the medical profession. Pulmonary tuberculosis, with its 165,000 annual victims in this country alone, will soon be a thing of the past, through wisely applied antiseptics. Electroscopic and other explorations now penetrate the dark and otherwise hidden places of the human body, making them a glow of light to the diagnostician. But little, if any, of the human anatomy is absolutely beyond reach of medical science or relief. The abdominal cavity is no longer a *terra incognita* to the resources of surgery, thanks to Lister, of Edinburgh; McDowell, of Kentucky; Battey, of Georgia; Lane, Gross, Agnew and others. The once-hidden recesses of the brain are now penetrated with impunity, saving lives and minds formerly doomed to destruction, thanks to Fritsch and Hitzig, of Germany; Ferrier and Horsley, of England, and Bartholow, of America, the last having been the first physician in the world to explore and prove the truth of cerebral localization by demonstrations on the living human brain.

Dr. Hughes then took up for consideration the complications of influenza, and more particularly the nervous and psychic aspects and sequelæ of the disease. The pneumonia of influenza, it was pointed out, is suggestive of that which results from section of the vagi, and may be ascribed to a toxic influence exerted upon the medullary centers. The therapeutic indications to be deduced from this conception of the disease are the enforcement of rest and the adoption of reconstructive measures. Chloral was recommended as the best antiseptic, hypnotic, and calmative, even in the delirious stage of the disease. In this condition ammonium bromid may be usefully added. For the pain the analgesics derived from coal-tar products and the sweat-producing opium-

combinations were recommended, together with the elimination of all circulatory influences exerting a disturbing and depressing influence upon the nervous centers, *e. g.*, the rheumatic or the venereal poison.

Dyspepsia was next considered from the point of view of its cerebral origin. It was maintained that the disorder is more common in those who do intellectual work rather than in those that eat largely and indiscriminately. The relation was said to exist principally through the neural connections of the brain and the stomach. This is illustrated in the association of migraine and nausea and of gastric disturbances and vertigo.

The brain influences the stomach and the stomach influences the brain, but the power of the former over the latter is far greater than that of the latter over the former in chronic conditions.

In conceding this influence of the nervous system over the digestive processes, we need not ignore any fact of chemico-biologic research, or shut out any of the light thrown on the subject by the investigations elucidating the functions of the stomach.

The liver, the kidneys, the bladder, and the bowels, are similarly influenced by emotion, and the lymphatic system is likewise under nervous control, like the arterioles, by the vasomotors.

A center in the medulla also influences, through the chorda tympani nerve and probably the sympathetic, the salivary secretion. A center there also influences the action of the kidneys. The chorda tympani contains secretory and vaso-dilator fibers, the sympathetic, vaso-secretory and vaso-dilator. Salivary secretion is induced reflexly by mastication and the irritation of the presence of food in the mouth and stomach and by the vivid remembrance of certain foods whose eating has made an agreeable impression, and by emotion.

The vagus and the vasomotors influence, or govern, circulation, respiration, and digestion.

The dominion of the nervous system over the spleen is also conceded by the physiology of the day.

Physiologists now maintain that its metabolism is controlled directly by the nervous system.

Hysteria illustrates from the standpoint of clinical observation how suddenly and how extensively nearly all the organs of the body may be profoundly disordered in function by morbid impressions through the nervous system.

There is a suggestive practical lesson in this "neuro-mimesis," or mimic neurosis, as to the relation of the nervous system to diseases in general.

Dr. Hughes further dwelt upon the tropho-neuroses, the question of physiologic rhythm and its practical bearing upon the management and treatment of the sick, the importance of the early recognition of neurasthenia, the relations of neural overstrain to the development of carcinoma and pulmonary tuberculosis. He also considered the advances made in neuro-dermatology, the relation of certain affections of the heart to cerebral influence, the relation between hemophilia and the vasomotor system, the dependence of the bodily temperature and fever upon conditions of the nervous system, the relations between the nervous system and the liver. He referred to the possibility of leukemia being a neurotrophic blood-disease, and called attention to the fact that rattlesnake-poison first acts with deadly nervous

shock. Finally, attention was directed to the treatment of inebriety.

DR. DIDAMA, of New York, moved that a vote of thanks be extended to Dr. Hughes for his address. Carried.

A resolution was offered by DR. MARCY, of Boston, recommending the appointment of State Examining Boards. Carried.

The report of the *Journal* was adopted as the sentiment of the American Medical Association.

Adjourned, to meet on Thursday, for special consideration of the Constitution and revision of the Code.

(To be concluded.)

NEWS ITEMS.

The Cholera in Europe.—It is reported by cable that cholera has broken out in Upper Silesia, Prussia, and also in the city of Stettin.

Despatches from the East Prussian frontier give alarming news of the spread of the disease. In Mislowitz the hospital has been filled with cholera-patients, and huts are building for those who cannot gain admission. At Schilno, near Thorn, there are three cases of cholera. The Vistula has been declared infected throughout the district near Thorn, and bathing in it has been prohibited.

There is a decided falling off of the epidemic of cholera in Eastern Galicia, the last report showing only four cases and two deaths, the total to date being thirty-nine cases and seventeen deaths. In the Galician towns of Skala and Sikierzynce, both near the Austro-Russian frontier, in which cholera now prevails, the drinking-water used by the people comes from a polluted river; there are no wells or springs. The situation along the Russian frontier may be regarded as dangerous owing to the number of centers of infection.

In Constantinople the condition of the epidemic varies greatly from week to week, but on the whole may be considered as greatly ameliorated. It is believed that the dissemination of cholera in Turkey is chiefly due to transport-ships conveying Turkish troops from point to point.

The accounts of the epidemic at Lisbon are very conflicting. It is certain, however, that an epidemic, at first believed to be simply one of diarrhea, appeared early in April. Later it was announced that the comma-bacillus had been found, and as this occurred at a time when there was an average of seventy cases daily, quite a panic ensued. The epidemic has now somewhat abated, and it is officially denied that the disease was Asiatic cholera.

In Spain sporadic cases of cholera have been reported, but not officially confirmed.

In France cases of cholera continue to occur in the departments of Finistere and Morbihan.

No cases of cholera have been reported in Italy. The quarantine regions of this country have been increased and several new stations established.

The Outcome of a Suit for Malpractice.—In 1888 Dr. C. D. Palmer, of Cincinnati, in performing a perineal operation upon a woman, broke his needle. Careful search failed to find one of the fragments, either in the soft parts or on the floor. The patient was not doing well

under the anesthetic, so that further search was deemed unwise and the operation was brought to a finish. A few days afterward the doctor was thrown from his buggy in a runaway accident and received severe injuries about the head, remaining unconscious or semi-unconscious for about a month, and being utterly unable to attend to his business for a year. In the meantime the patient fell into the hands of another physician who operated again and found the needle. A suit for \$10,000 for malpractice was brought against Dr. Palmer, but decided in his favor May 26th.

The State Board of Medical Examiners will conduct its first examinations of applicants for license to practise medicine in Pennsylvania on June 11, 12, and 13, 1894, at Philadelphia (at the School of Applied Art, Broad and Vine Streets) and Pittsburg (in the Council Chamber, Municipal Hall). It is announced that those granted licenses by the New York Board of Medical Examiners will receive the certificate of the Pennsylvania Board without examination.

Dr. Emory Lanphear, the editor of the *Kansas City Medical Index*, has resigned the chair of Operative Surgery and Clinical Surgery in the Kansas City Medical College and has removed to St. Louis, to assume the chair of Surgery in the St. Louis College of Physicians and Surgeons.

The Medical Society of New Jersey will hold its one hundred and twenty-eighth annual meeting at Lake Hopatcong, June 26 and 27, 1894. An interesting program has been arranged.

The New Hampshire Medical Society will hold its one hundred and third anniversary meeting on June 18 and 19, 1894, at Concord. An interesting program has been arranged.

Prof. Vincenz Czerny, of Heidelberg, has been designated as the successor of Virchow in the direction of the first surgical clinic of the University of Vienna.

BOOKS AND PAMPHLETS RECEIVED.

Albuminuria without Manifest Organic Renal Lesion. By Waldron B. Vanderpoel, M.D. Reprinted from the Medical Record, 1893.

Quiz Compend, No. 4. A Compend of Human Physiology especially adapted for the Use of Medical Students. By Albert P. Brubaker, A.M., M.D. Seventh edition, revised and enlarged, with new illustrations and a Table of Physiological Constants. Philadelphia: P. Blakiston, Son & Co., 1893.

Laughing Gas as an Anesthetic in General Surgery. By T. L. MacDonald, M.D. Reprinted from the Southern Journal of Homeopathy, 1893.

A Text-book of Physiology. By M. Foster, A.M., M.D., LL.D., F.R.S. Fifth American, from the fifth English edition, thoroughly revised, with notes, additions, and three hundred and sixteen illustrations. Philadelphia: Lea Brothers & Co., 1893.

A Treatise on Hygiene and Public Health. Edited by Thomas Stevenson, M.D., F.R.C.P. London, and Sydney F. Murphy. In three volumes. Vol. II. Philadelphia: P. Blakiston, Son & Co., 1893.

Zur Kenntniss der Hyalinen Degeneration der Carcinom-epithelien. Von P. G. Unna. Sonder-Abdruck aus Dermatologische Zeitschrift.